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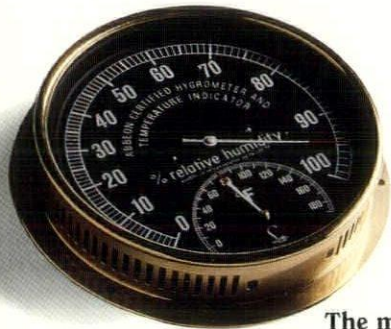
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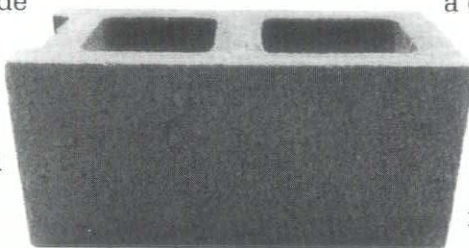






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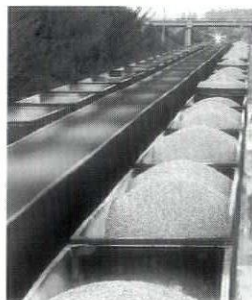
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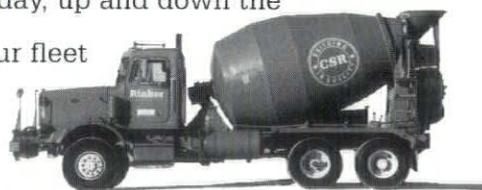


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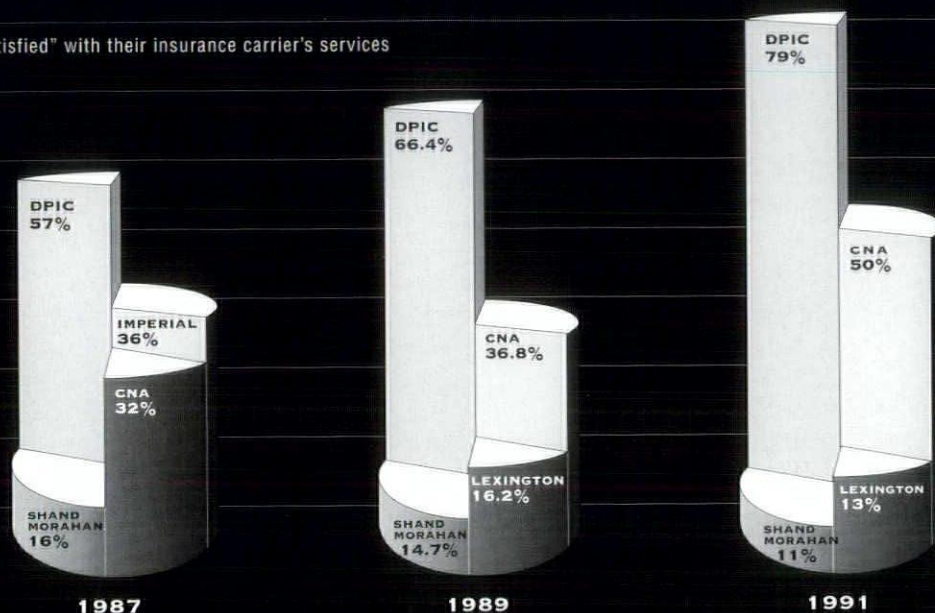


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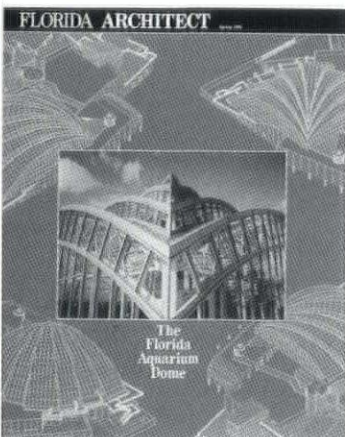


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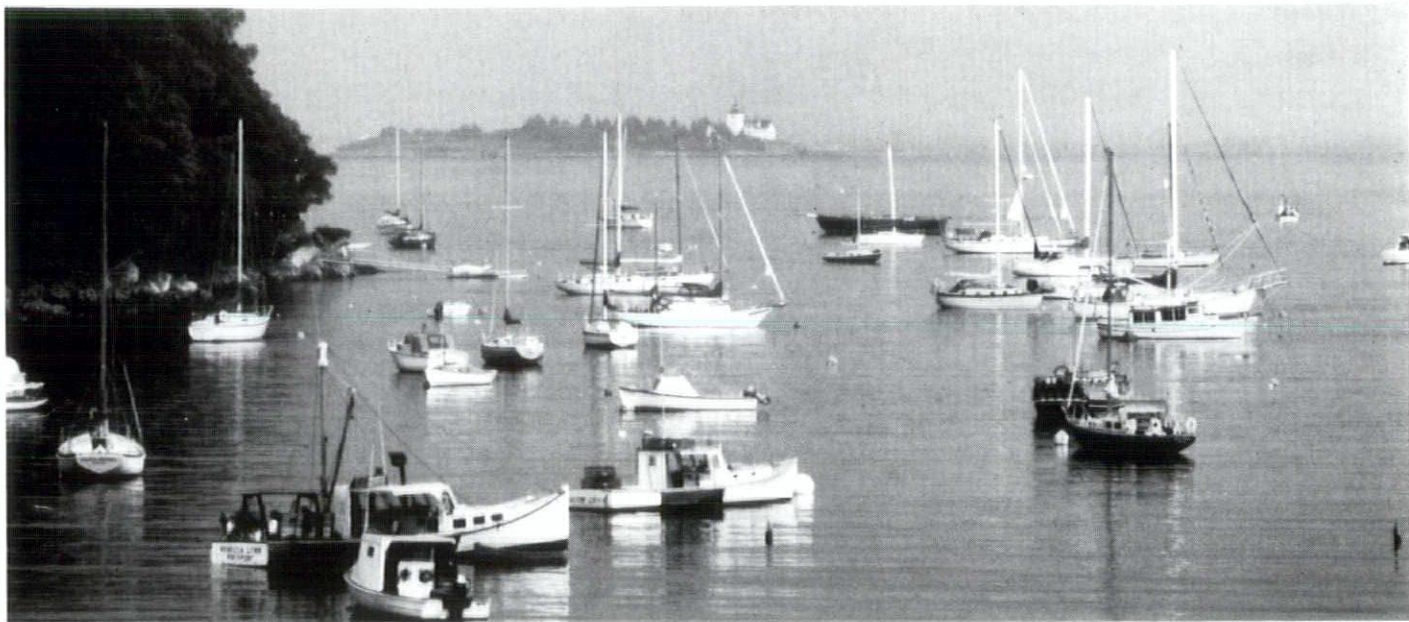
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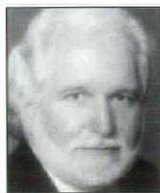




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**M**y appointment as editor just before the holidays signalled the beginning of a new era for me as well as for *Florida Architect*. For me, it meant revitalizing a long-standing interest. For the magazine, it marked a break with a comfortable past—not just a new editor but a new designer, Peter Denes, as well.

My training as an art historian took place (at The Pennsylvania State University) in the mid-sixties when the discipline was still called art and architecture history. It was the architecture part that first attracted me. As a teenager, I spent a lot of time in New York City, looking up and around, and as an undergraduate I “studied abroad” one semester at the historic and grand University of Salamanca, in Spain. Architecture, including the study of its history, was no less than awe-inspiring, an alliance of spirituality and practicality, of genius and geometry. (For one good reason and another, I got sidetracked, and after some teaching stints in small East Tennessee colleges, arrived in Florida working as an editor and writer.)

In preparing this issue, it was clear that these values are still being fought for and observed. Albeit, in this age of bean counting, many of the “powers that be” lack the vision to recognize the value of paying a little more for the spirit and the genius. Frank McLane decries this situation in his Viewpoint, while Larry Schneider’s Legal Note concerning ADA requirements graphically points up the abiding need for practicality and geometry.

I look forward to learning and writing about Florida’s architectural community and its inspired work—the old and the new, inside and out, from functional systems to elegant details. For this issue the assigned theme was “new technology,” and I pursued applications on many fronts and with a tight schedule. My profound thanks to those of you who responded but whose projects did not arrive quite fast enough for consideration. Those projects featured here represent only a few of the widely various new technology applications you presented: Hellmuth, Obata & Kassabaum’s pioneering use of CADD-CAM; Spencer and Jonnotti’s modular prototype; and Wolfberg/Alvarez’s interstitial space design for containing and maintaining the service systems of a large, modern medical center. Pragmatic, but also fun (and more than a bit disconcerting), characterizes Tom Martineau’s look at how technology will affect the profession in the near future.

Gratefully, I can report that longtime editor Diane Greer, who is now devoting herself to teaching architecture full-time and editing some academic publications, will continue contributing features and reviews.

With high expectations, I look forward to a rewarding relationship with AIA Florida members and to sharing your accomplishments as well as your views on important issues. **MB**

*Florida Architect* serves the profession by providing current information on design, practice management, technology, environment, energy, preservation and development of communities, construction, finance, economics, as well as other political, social, and cultural issues that impact the field.



## 1995 Awards Program in Full Gear

The Call for Entries for AIA Florida's Awards for Excellence in Architecture is in the mail. If it seems earlier than usual, it is. The annual meeting and awards event are scheduled for July this year, instead of in the fall, so entries are due sooner. A previously entered project is still eligible—this year's jury may think it's just great.

There will be a special emphasis this year on projects that have a value to society, in addition to esthetics. Architecture has meaning to the client and society beyond just looking beautiful. So be sure to describe how your good design also benefits society. This aspect will be considered by the judges and will play a key role in the

enhanced public awareness program being planned for the award winners.

Categories also include projects for unbuilt designs, test of time, and firm awards. Entry requirements are simple and rewards are great. Entries are due at state headquarters by April 26, 1995. Good Luck!

## Government Affairs, The Miami Way

"Things are a little different here," an old slogan used by the Greater Miami Tourism Board, aptly describes the activities of the Government Affairs Committee of the Miami AIA Chapter. The committee currently oversees ten subcommittees dealing with every aspect of govern-

ment influence on the practice of architecture.

Various subcommittees concentrate on important areas such as resolving code issues, streamlining bureaucratic processes, and defending the profession from encroachment or limitation by others. The subcommittee handling public agency work maintains a liaison with every major county agency that routinely hires architects for its projects. This subcommittee also addresses scope and contract issues, monitors and advises during the selection procedures, and seeks to assure that typical areas of practice are not limited or "warped" by client agencies.

A new initiative, called "Legislative Partnering," eventually will partner each Dade County delegate to the state legislature with a local member architect, who will consult, advise and represent the AIA position on issues sensitive to the profession as well as those of general import. The program promotes the views of architects by giving them the ears of lawmakers. Another intent is to ensure that architects are considered for appointment to any board, commission, or committee that deals with planning, designing, preserving, or enhancing the built environment.

A well-known and respected local lobbyist, brought on-board last year to advise the Chapter on the ways of accomplishing given goals, "has put our fingers directly on the pulse of local politics," says Mike Rodriguez, Vice President of the Miami Chapter AIA and Government Affairs Committee Co-Chairperson. A Chapter Fax Network not only advises interested members of ongoing events but also notifies them when a strong architectural presence is needed at any hearing or event. In the past three years, the committee has

met every challenge head-on, putting architects in South Florida on the map. Rodriguez encourages other chapters to institute similar programs if they have not already done so, saying, "Only when we are heard will we be fully understood."

## BPR Online

The Department of Business and Professional Regulation (BPR) has implemented a new online computer service that will allow architects to verify the status of a license.

BPR Online was created to process the voluminous mail and telephone requests for licensure verification. To check on one license during the renewal phase, or thirty licenses to verify project consultants, users can access the system by dialing (904) 488-3387 via PC-based modem.

Individuals or businesses may access this service free for 75 minutes during each 24-hour period. For information on how this system works, contact Chris Oliver at BPR (904) 921-0125, or call Joanna Booth at AIA Florida (904) 222-7590.

## New Florida Foundation Officers

Tallahassee Architect, **Ivan Johnson, III, AIA**, has been elected President of the Florida Foundation for Architecture. Partner in Johnson Peterson Architects of Tallahassee and Sarasota, Johnson has been a Trustee since 1991. He will serve a two-year term.

**Wayne Drummond, AIA**, Gainesville, was elected Vice President. Drummond is Dean of the University of Florida College of Architecture.

**Frank Folsom Smith, AIA**, Sarasota, continues as Treasurer of the Foundation. He is a

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Don Cooper (below) and the Southern Home Award-winning addition to the Moore-Mays home. Photos Copyright by Southern Living, Inc., 1994. Reprinted with permission.

partner in the Folsom Group, and has been a Trustee of the Foundation since 1991.

**Herbert Savage, AIA**, Marco Island, also was re-elected to a two-year term as Secretary of the Foundation. Savage has been a Trustee since 1990.

**Don Cooper, AIA, honored by Southern Living Magazine**

Tampa architect, Don Cooper, AIA, has won a Southern Home Award from *Southern Living* magazine. Cooper, who is president of the Tampa firm Cooper Johnson Smith Architects Inc., designed an award-winning addition to the home of Analee Moore and Mat Mays. Featured in the February issue of *Southern Living*, the home was one of six winners chosen from more than 250 entries in the magazine's annual awards program.

"Don Cooper's design makes maximum use of available space and turns an already attractive home into something extraordi-



nary," said *Southern Living* Homes Editor Linda Hallam. "Cooper blended regional heritage with innovative features to create outstanding design."

**Book Review**  
***The Energy Design Handbook***

*Edited by Donald Watson, FAIA*  
The AIA Press, 1993  
520 pp., b & w illus., references  
\$35.00

*Reviewed by Diane Greer*

At a time when energy-efficient design should be of primary concern to designers and clients alike, this book is an absolute must for every architecture office. Each chapter is an edited version of separate monographs that were published previously in *The Architect's Handbook of Energy Practice*. That work was prepared by the research staff of the AIA Foundation. A new approach was used for the current text, which is formatted for self-study using a method developed with educational consultants.

Energy expert Donald Watson has presented the material in two parts. The first 360 pages are brought together under the general heading "Design," addressing everything from climate and site to the building envelope, passive cooling and heating, shading and sun control, daylighting, HVAC systems, active solar systems, and photovoltaics. The remainder of the text comes under the heading "Analysis" and deals with topics such as energy transfer, U-values, thermal analysis, heat gain and loss, and estimating energy use. Together, these two sections present an extremely concise and thorough overview of the energy issues that relate to architecture and are of critical concern to today's practitioners.

Interspersed throughout the chapters are case studies dealing with specific buildings that have successfully incorporated the particular system being discussed. Florida readers will note the conspicuous absence of

references to Florida projects. These case studies include a photograph and a project description that is brief and to the point.

*The Energy Handbook* contains hundreds of explanatory drawings, diagrams, and charts designed to be easily read and understood even by practitioners with little experience in the energy arena. The energy design concepts described can be incorporated into the design of any project, beginning with the initial goal statement, site analysis, and schematic design and continuing through design development, lighting, mechanical systems engineering, construction, and use.

As Watson notes in the introduction, today's concerns about energy and the environment "can be said to have evolved from the long-established Vitruvian 'conditions for building well'—*utilitas, firmitas et venustas*, or commodity, firmness, and delight—an enduring definition that becomes richer as our conception of architecture becomes more responsible and profound."

**Clarification**

*Florida Architect* has been notified that credits listed in the Fall 1994 issue for the design of Pine View School For The Gifted, in Sarasota, were in error, due to incorrect information provided to *FA*. The Architect of Record is W.R. Frizzell Inc., Ft. Myers, and the Associate Design Architect is Carl Abbott Architects/Planners, P.A., FAIA, Sarasota; the Owner is the Sarasota County School Board; the Owner's Construction Representative is Carol Woodson. The Principal of the School is Steve Largo.



# The Future of Technology and Architecture

By Thomas Martineau, R.A.

**L**ikely technological trends and developments during the next 10 to 20 years in the building design and construction industry are certain to change architectural practice, and the entire construction industry, forever.

Major trends that will influence the impact of technology on architecture in the coming two decades are:

- Reconstruction
- High-performance materials
- Automation and robotics
- Information systems and telecommunications.

## Reconstruction: The Next Bonanza?

In many areas of the United States the amount of money spent on reconstruction now equals or exceeds expenditures for new construction. Reconstruction is becoming the dominant share of construction

Mid-South, Rocky Mountain, Middle Atlantic, and "Oil Patch" states showed an average of 88 cents of reconstruction for every dollar of new construction.

With respect to building types, a recent U.S. Department of Commerce survey revealed that the majority of health-care facilities are already in the reconstruction category, and educational facilities show nearly 90 cents of reconstruction for every dollar of new construction.

Florida architects might consider one or more of the following strategies to ride the crest of this wave.

- Getting a reconstruction project track record by obtaining small jobs first, then larger ones. (Large nonresidential reconstruction jobs are out there. For example, New York

in reconstruction or training existing staff in such areas as cost estimating, contract documents, construction methods, new materials and products, construction management, etc.

- Establishing a separate cost center for reconstruction work.
- Studying market opportunities to offer specialty services in such areas as historic preservation and other restoration, radon and asbestos mitigation, pipe relining, concrete coring, small-and large-diameter boring and tunneling, etc.
- Forming a relationship—perhaps design-build—with a contractor or builder strong in reconstruction.

## High-Performance Materials

"Space age," higher strength, lightweight metals and concretes have found increased use around the globe, as attempts are made to lighten structural system loads and simultaneously increase load-bearing capacity.

For example, the recently completed, world's tallest reinforced concrete building, Chicago's 311 South Wacker Drive Office Tower, is a pioneering application of rapid construction with high-strength, polymer-added or polymer-alloy concretes. Other examples include a "fire-resistant" structural steel, whose Japanese producer has initiated test-marketing, claiming that fireproofing of its members will be unnecessary in most applications. A Canadian company has developed a magnesium oxyphosphate cement technology allowing the preparation of countless blends or

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## 114th Congress Opens in Reality

Washington, CB  
Associated Press  
January 12, 2015

Congress will open its 114th Session tomorrow in reality at the historic United States Capitol Museum in Washington, Columbia. Columbia Governor Smith explained, "According to the 48th Amendment, both Houses of Congress are to meet at least one day at the start of every new session in reality in order to shake hands and experience each other physically. Thereafter, all committees and general sessions will meet in the usual virtual reality." Smith continued, "The 48th also requires all Members of Congress to live in their respective states and districts during the session."

The Smithsonian Institution reports its National Capital Museum and Park will be closed to reality visitors tomorrow, but extra virtual reality access channels will be opened for optimum citizen participation.

from EconoMonitor; Newszone 36.18yuk;  
downloaded 13.12.11:17:36.14pm

## Wood/Steel Glut, Biomass Crunch Continue

A trend begun in the early 2000's continues to wreak havoc in the environmental industry sector: wood and steel are out and biomass is in.

Worldwide lumber production reached its lowest levels ever during the third quarter of 2011, while the globe's biomass output has reached record levels, especially in the plains areas of Asia, North and South America, and the African Steppes. "Some areas of the world grow sugar cane for the pulp only, because sugar's world supply is fully saturated. The demand for biomass appears to be bottomless," explains Bette Rettinger, Chief Economist of the World Council of Building Materials Producers and Suppliers.

"We have witnessed a radical shift in technology during the past decade, with organic/inorganic materials blending

technology completely outclassing and outperforming pure wood and steel products in all aspects of price and capability," said Frederika Boomer, who received last year's Nobel-Mitsubishi-IG Farben Prize for Electrochemistry. "Wood is no longer used in any construction except in isolated instances for the rich and eccentric, and recycled steel is only used in the very cheapest buildings with the shortest life spans."

"The new oxyphosphate cement blends with sugar cane, rice hulls, corn stalks, beans, straw, and other biomass fillers are the true champions of the materials field," added Bernadette Jones of the Transportation Technology Testing Institute. "Even the vast majority of engines and other vehicle parts are now made from ceramic or other blends."

markets in developed nations, including the United States. By the end of 1992, the U.S. Department of Commerce showed reconstruction already had reached near equality with new construction in the South Atlantic and Pacific Coast states and had outstripped new construction in the New England and Plains states. The

City's 626,000 s.f. "320 Park Avenue" project is a complete reconstruction of an existing tall building. Under current zoning laws, a new building could only have about two-thirds of the original floor area, but a reconstruction of the 1961 vintage structure lets it be "grandfathered" in under old zoning laws.)

- Hiring personnel experienced

recipes combining cement and biomass for imitation wood, slate, and, ironically, plastic laminates, which are themselves often imitations of wood, marble or other traditional finishes. Special paints and polymer coatings have been and are being developed for the restoration and rehabilitation of existing structures. Selective low-emissivity exterior glass has been engineered in the United States with the capability of allowing daylight to penetrate a building's interior while virtually eliminating all heat radiation from passing through the material.

Codes and standards organizations have been the traditional barriers to the acceptance of new materials and methods. However, efforts are now under-



way in most such organizations to put in place mechanisms to assure the well-informed, speedy acceptance or certification of new technologies. These efforts need the fervent support of all industry participants.

**Automation and Robotics**

As is the case with most contemporary industries, automation and robotics are finding increasing use in the building design and construction fields. Some developments will be a continuation of existing trends.

- Further automation of architectural offices, including full digital integration of drawings and specifications
- Broadening of the automated support of the full process of planning, programming, design, contract documents, construction management, and long-term facility management, using a single item of software and one common, evolving database
- Broadening of building manufacturing activity, with increasing use of CADD-CAM technology on the part of designer-manufacturers. In the residential sector, this will take the form of modules and

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reply to WHL@cpu.com

Families with two or more telecommuters and several distance learners are at greater risk for family conflicts and family breakups, especially in the United States and Europe, a new WHL survey finds. Japanese social values apparently let such families cope more successfully.

"People are simply together in the same place too long when they all telecommute and distance learn," said Olivia Berquist, Senior Sociopsychologist at the Mount Fuji Family Trauma Mitigation Research Center & Hospice. (fujitrau@caritas.edu.res.com) Decades ago, most people left their homes to do work or to go to school, and the pressures on families were less severe as a result. Berquist suggests families affected by Excessive Togetherness Syndrome should get out into the world in real time, or make greater use of virtual reality hookups to get away from it all.

panels, and in the nonresidential sector, components in an open- or closed-system fashion. Design-build enterprises using factory-based production will increase, with architectural practitioners as key participants

- Continued use of robotics and automated technology on the construction site, concentrated on hazardous operations

(asbestos removal, underwater construction, suspension bridge inspection and painting, etc.) and on small-diameter remote tunneling and boring for infrastructure construction. (Many exotic on-site robots will remain curiosities.)

**Information Systems and Telecommunications**

The automobile and the telephone changed the configuration of our towns and cities, causing new and often insurmountable challenges for architects and urban designers. The advent of new information and telecommunications technologies has the potential to effect yet another, similarly radical, transformation of the structure of our communities.

Four major technological developments appear to be the keys to this radical change.

1. The personalized office. Instead of being a permanent space in an office building, "the office" is becoming synonymous with the person who is the office-holder: the office will be wherever the office-holder is located at any given time. Communication via fax, fax modem, e-mail, personal telecommuni-

cation devices, teleconference, picture telephone—and occasionally in person—along with electronic record management and access, already are shifting the location of the office from a central place. Eventually, videoconferencing by holographic projection will give greater realism to virtual conferences and business meetings between people in remote locations, thus cementing this trend.

2. Personalized communications access. As an extension of the personalized office concept, most telecommunications systems will eventually focus on the location of a person instead of a physical location such as a home, office, or car. The telephone will be as much a personal accessory as a watch, eyeglasses, or a pacemaker, and each person will have a personal telecommunications device with a unique access number. Hand- and voice-print signatures will permit authentication and legal transactions via electronic channels.

3. Universal wireless information transfer. As radio data transmission, laser, satellite, and cellular digital technologies become the standard for all types of data transmission, hard-wiring will become a thing of the past. Any building will have the potential of becoming "smart" overnight, as no permanent wiring harnesses will be needed.

4. Global information and communications networks. What is known in the vernacular as the "information superhighway" already is well under construction. Every form of communication and every type of information system we know will soon be interconnected and available to anyone from anywhere.

**LabDepSec: Commuter Class Revolt Likely, Sporadic Strikes Certain**

U.S. Secretary of Labor Moses Usufiani, interviewed on America OnLine's HotSeat forum ten minutes ago, acknowledged the serious possibility of a commuter class revolt, and held out as certain that wild cat strikes would be staged as early as next week. He reiterated his remarks made earlier today in a speech before the AFL-CIO-UFW's annual meeting in Bal Harbor, Florida.

"Commuters are the logistical backbone of our society. Even though most of us can choose where to live, commuters' jobs are the anchor which requires them to be near their work. We acknowledge that most commuter jobs are necessarily and obviously in less desirable areas, near industrial production and supply zones.

"The U.S. Congress has authorized additional expenditures for the visual improvement of these areas, and for an increase in the variety of virtual reality available for diversion and distressing. We are making every effort to assuage the understandable jealousy, anger and frustration of our commuter classes, and express the hope that in the future we will be able to automate other areas of industrial and food production, thus freeing more of the commuters to move up to telecommuting and distance learning status."

"This Union will not rest until every American enjoys the same freedoms of location independence, unshackled from the ball and chain of a job requiring a physical presence near some ugly, decaying former city center," said Bork Tawin, AFL-CIO-UFW President. "Some of our members commute up to 15 minutes one way per three day work week. In a year, this adds up to 1.5 hours per week times the thirty week work year, or 45 hours of time wasted per year. This is intolerable."

For up-to-date job action info, go to INTERNET affcioa@w@columbia.com



## Selected Scenarios

The following scenarios have been developed as logical, plausible extensions of these developments.

### Scenario 1:

#### Focus on home base.

Homes will have some dedicated office space with support facilities such as a telecommunication center and, perhaps, teleconferencing space. Single-family homes may have one or more adult telecommuters (i.e., working at home). Children may become "distance learners," telecommuting to school and college. A 100-percent switch to telecommuting and distance learning is unlikely, for human nature, with its need for personal contact, will not tolerate a total conversion to electronic communication.

#### Implications for the profession:

It is not too early (or too late) for schools of architecture and urban design to explore (a) house designs and communities that can accommodate multiple telecommuters and distance learners, and (b) reconfigurations of urban areas to account for fewer actual office commuters and, perhaps, more leisure time visitors to cultural and community events.

### Scenario 2:

#### Location independence.

Families whose members telecommute can choose the location of the family residence independent of its physical proximity to a job or school. Families may choose their home location based instead on climate, scenery, or available recreational opportunities, opting for fewer, though perhaps longer, commutes to sites at existing urban clusters where physical offices, schools, and colleges may still be located. As yet

unimaginable population shifts are likely. Further exodus of permanently resident middle-class families from urban areas and suburban bedroom communities to rural seaside, lakeside, mountain, or desert resort communities could lead to a double-threat: further decline of existing urban areas and increasing pressure on environmentally sensitive regions for the development of new, permanent communities. On the other hand, city-loving telecommuters will be attracted to relocate to "world class" cities for their cultural and social amenities.

#### Implications for the profession:

Location independence will place a dual challenge and responsibility on architects and urban designers. Working in concert with public officials and the development community, they must use their utmost creativity (a) to reinvent our major downtowns as attractive places to live and "bathe" in the sociocultural advantages of urban life, e.g., museums, theaters, night clubs, parks, recreation, sports, conventions, and (b) to prevent the potentially explosive growth in resort areas from devouring the very resources that attract people to these locations.

### Scenario 3:

#### Emergence of the "tune-in" building.

The decline in demand for downtown office space will affect other types of facilities located in central business districts. There also will be less emphasis on libraries, banks, schools, colleges and many types of stores as physical "walk-in" or "drive-in" facilities. We will "tune in" to their services instead. Early signs of "telebanking,"

## Architect Sues Sysop Over CADD-CAM

Detroit Industrial Park, MI  
Reuters North American  
August 15, 2009  
via NYTimes Downlink 35.09.09

Dearborn architects Meyer, Unger, Stevens and Horvath filed suit yesterday in North-Central Litigation Court against Barney Hopewell, Sysop of the Midwestern States Automated Plans Review and Permitting Clearinghouse for gross negligence and dereliction of duty with malicious intent, the Detroit Industrial Online Press reported yesterday.

The suit stems from a 2008 incident in which the Sysop allegedly allowed the plans and specifications prepared by MUSH for a tune-in life provisions supply center to be forwarded to the manufacturer for preparation of panels and modules before plan review and permitting had been completed. Useless, unapproved and unpermitted panels, modules and other components, valued at approximately \$6 billion, had been erroneously produced by the CAM routine before the error was caught by an independent, self-policing, internal software monitoring loop.

Wallace Stevens, attorney for MUSH, noted that "Because the Clearinghouse is fully automated, an error such as this had to be caused on purpose by the Sysop in order to harm MUSH, the building producer, the client, and perhaps the industry as a whole." When asked about Mr. Hopewell's possible motive, Stevens observed, "Mr. Hopewell and his family were among the last holdouts to leave Detroit when it was converted and rezoned for exclusive industrial production purposes. MUSH prepared the master plan for this conversion, and the tune-in supcenter was to be located in the same spot where the Hopewell family home used to be. We seek full restitution and punitive damages from the Sysop."

"teleshopping," and other "tele" activities are already in evidence to support the "tune-in" prediction.

#### Implications for the profession:

A plausible—and desirable—consequence of the availability of numerous vacant or under-used buildings is their adaptive reuse for other purposes such as housing, educational, social, recreational and health-care facilities. This reinforces the previously noted challenge to reinvent our major downtowns. Adaptive reuse of existing facilities will need to become an art form and a major service of architects and urban designers, far beyond the present trend toward reconstruction. Schools of architecture should therefore place greater emphasis on adaptive reuse in the design studio, and practitioners should become better versed in this service.

## Conclusion

An amiably cynical view of unknown origin is often presented by members of the building design and construction industry:

*That the industry's product consists generally of one-of-a-kind, costly prototypes called "buildings," which are hand-assembled outdoors, by people who may or may not have worked together before, from drawn and written instructions prepared by other people, within antiquated and often-contradictory codes and standards, based on the designer's interpretation of the needs of an owner (who may be unable to know or articulate those needs), from materials and parts that come from hundreds of different manufacturers and numerous suppliers—and all under the scrutiny of underpaid and overworked building officials.*

Despite the predictions of pervasive and profound technological changes over the next two decades, it is doubtful that our industry's basic profile will ever veer radically from these cynical moorings. In addition, it would appear safe to predict that roofs will continue to leak, change orders will not go away, and litigiousness will rule. Why tilt at windmills?

*Thomas Martineau is a Professor of Architecture at Florida A&M University in Tallahassee. He has researched and written widely on diverse topics in architecture, construction, and facilities planning.*



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# Florida Under Glass

## The Florida Aquarium Tampa, Florida

**Architects:** Hellmuth, Obata & Kassabaum, Inc., and Esherrick, Homsey, Dodge & Davis, Inc., (joint venture)

**Design Principals:** Gyo Obata, AIA, and Chuck Davis

**Principal in Charge:** Pete Karamitsanis, AIA,

**Project Designer:** Robert Stockdale

**Project Manager:** Alan Temple, AIA,

**Exhibit Designer:** Joseph A. Wetzel Associates, Inc.

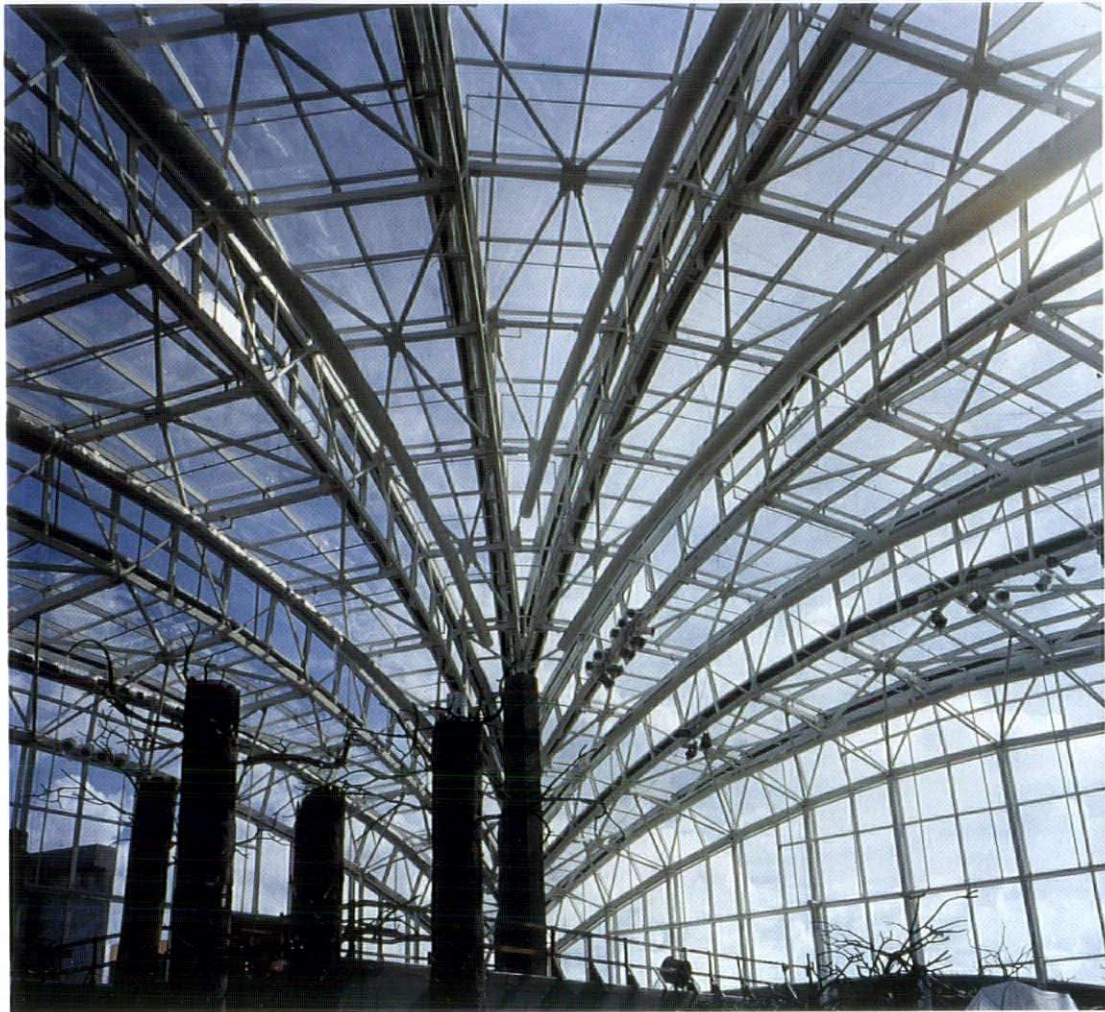
**Contractor:** Turner/Kajima

**Owner:** The Florida Aquarium, Inc.

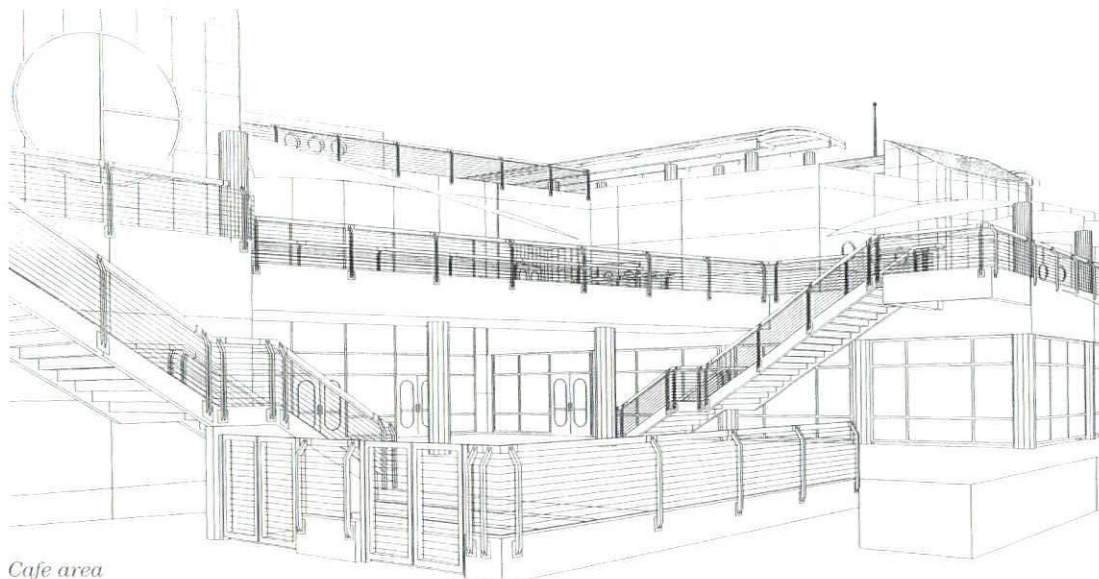
The Florida Aquarium's distinctive maritime contours—shell-shaped dome, sail-shaped canopies, and port-hole-shaped windows—are some of its signature features. While the ideas may have originated on the drawing board, the working designs for this geometrically complex project were accomplished using computer-assisted technology. Among the pioneers in CADD, Hellmuth, Obata & Kassabaum, Inc. (HOK) has used its own *HOK drawVision* software, which includes "walk-through" capabilities, to develop this and many other large projects.

When some of the consultants felt early on that the elaborate Aquarium program could not be built for the budget, HOK's response was, "Let's draw it." This kind of practical determination kept the mission and goals of the collaborative effort between HOK and Eshrick, Homsey, Dodge & Davis, Inc. (EHDD), in focus. As a result, the project will open on time, March 31, and on budget.

The 152,000 square foot, \$84 million Florida Aquarium will present, in microcosm, the aquatic "story" of Florida's

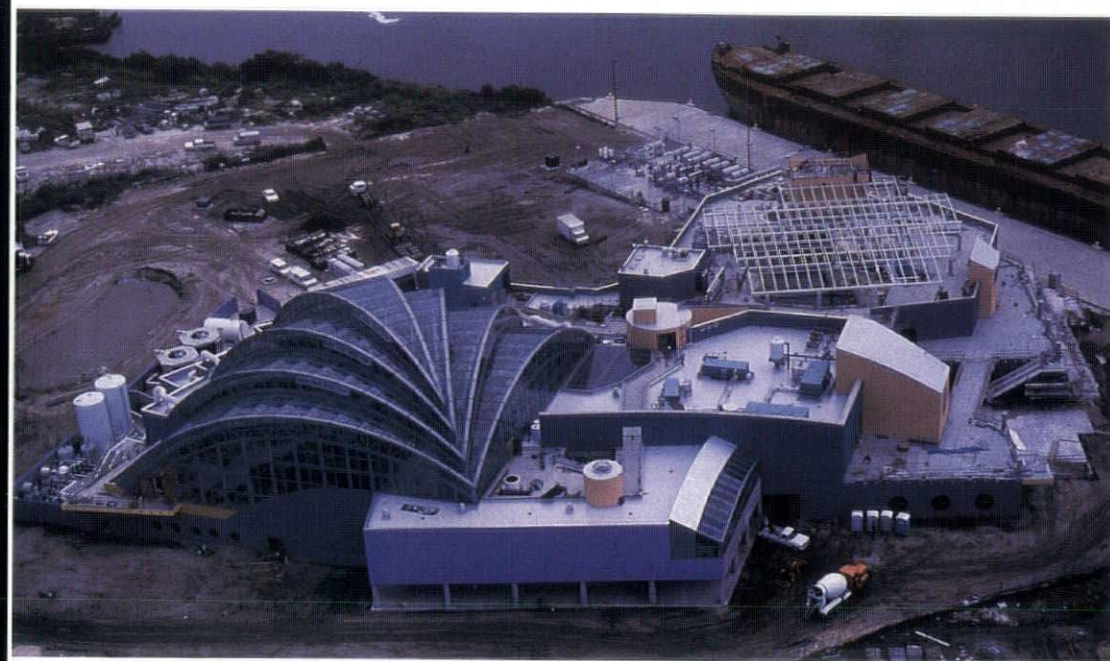


*Under the dome*



*Cafe area*





*Aerial view. Below is detail of west facade.*

unique environment and ecology. Architecturally, the goal was to convey as much richness and diversity as the natural habitat exhibits. Two major building components were required. In one, beneath the dome, a lofty skylit space in the shape of a seashell houses the Wetlands and the Bays and Beaches exhibits. The second, a two-story black box area, is the setting for the spectacular 500,000-gallon under-the-sea Coral Reef tank.

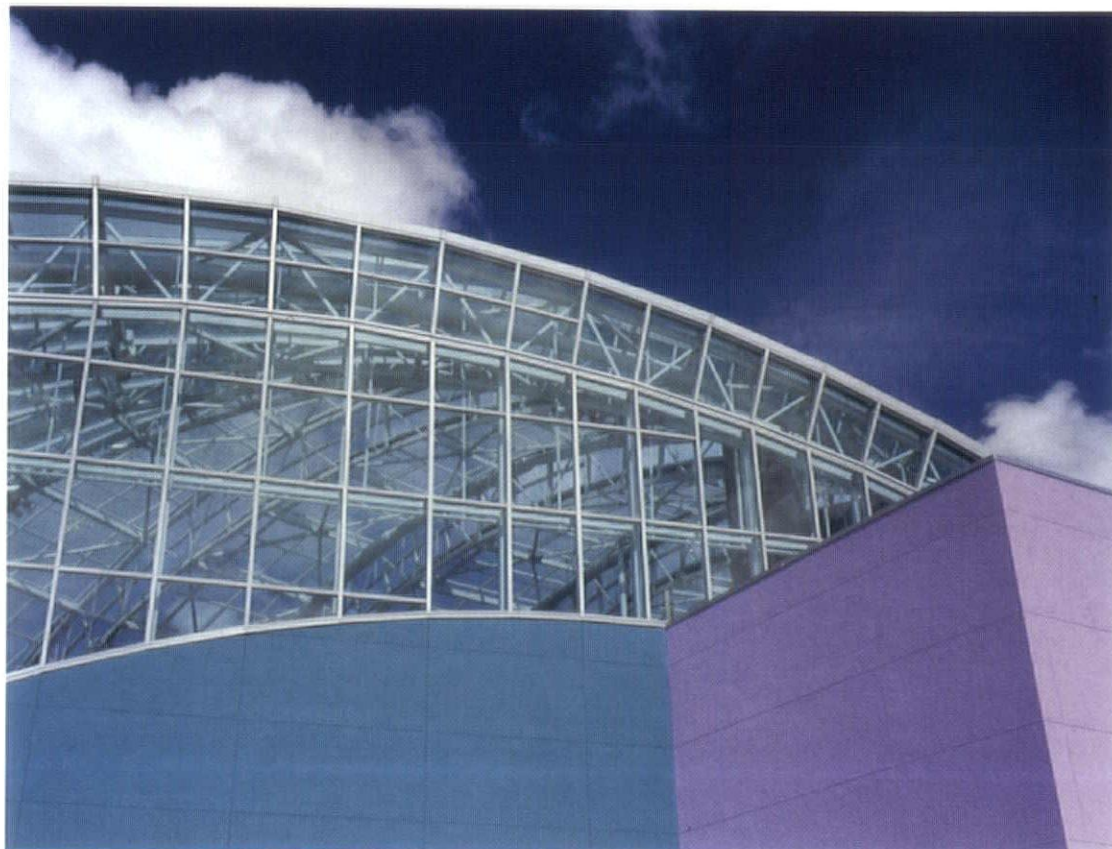
In the dramatic Coral Reef exhibit area, sequential graduated ramps wind their way around and "through" a coral reef, replicating the experience of an actual dive into dark depths. Windows are arranged so viewers will see the exhibits without seeing each other. The largest window, a 43-foot-wide by 14-foot-deep bay, is more than a foot thick at its base. To carefully control daylight at the top level of this exhibit (as well as to provide service access) the tank will be open to the sky but covered and protected from direct sunlight.

On approach to The Florida Aquarium, the multifaceted glass and structural steel dome

is the dominant focus. The image already has become a symbol of the Tampa water

front's evolving Garrison Seaport Center. Laminated glass chosen for the dome permits healthy growth of hundreds of species of sea and plant life while reducing heat gain and, thus, energy loads. Building systems have been integrated with some ingenuity. For example, air conditioning ducts inside the domed area are housed inside artificial trees. Unusual, too, areas housing the pipes, filters, and other aquarium-maintenance systems will be open to curious visitors.

In this project, meant to educate and inspire, architectural design had to reflect, rather than dictate, exhibit design. Essentially a life support for the exhibits, the building was conceived as a dynamic design that would allow for continuing refinement of exhibits and support systems without compromising its own integrity. *Photography by George Cott, Chroma, Inc.*





## Out-of-Sight Service

### Veterans Administration Medical Center West Palm Beach, Florida

**Prime Architects and  
Engineers:** Wolfberg/Alvarez  
& Partners

**Principal-in-Charge:**

David A. Wolfberg, AIA

**Engineering Principal:**

Julio E. Alvarez, P.E.

**Project Designer:**

Aristedes Garcia

**Project Manager:** Raul Estevez

**Health Care Facility**

**Planners:** Lammers + Gershon  
Associates, Inc.

**Civil Engineers:** Post Buckley  
Schuh & Jernigan

**Land Planners and**

**Landscape Architects:**

Edward D. Stone, Jr.

**Geotechnical Engineers:**

Jammal & Associates

**Owner:** U.S. Department of  
Veterans Affairs

It has been 20 years since the Department of Veterans Affairs built a totally new medical center. A lot has changed in that time. Treatment has progressed, not just in terms of medical technology and systems but in terms of the physical environment in which health care is delivered. Wolfberg/Alvarez & Partners, Architects & Engineers, designed the new facility to help realize the Department of Veterans Affairs' effort to humanize patient care. While endeavoring to create what architect and partner David Wolfberg calls a "hospitality environment," the project team also succeeded in coordinating a broad spectrum of innovations that will take the hospital gracefully into the next century.

The 400-bed, \$106 million hospital will provide medical, surgical, and intermediate care as well as psychiatric care to an estimated 9,000 inpatients and



*Aerial view*

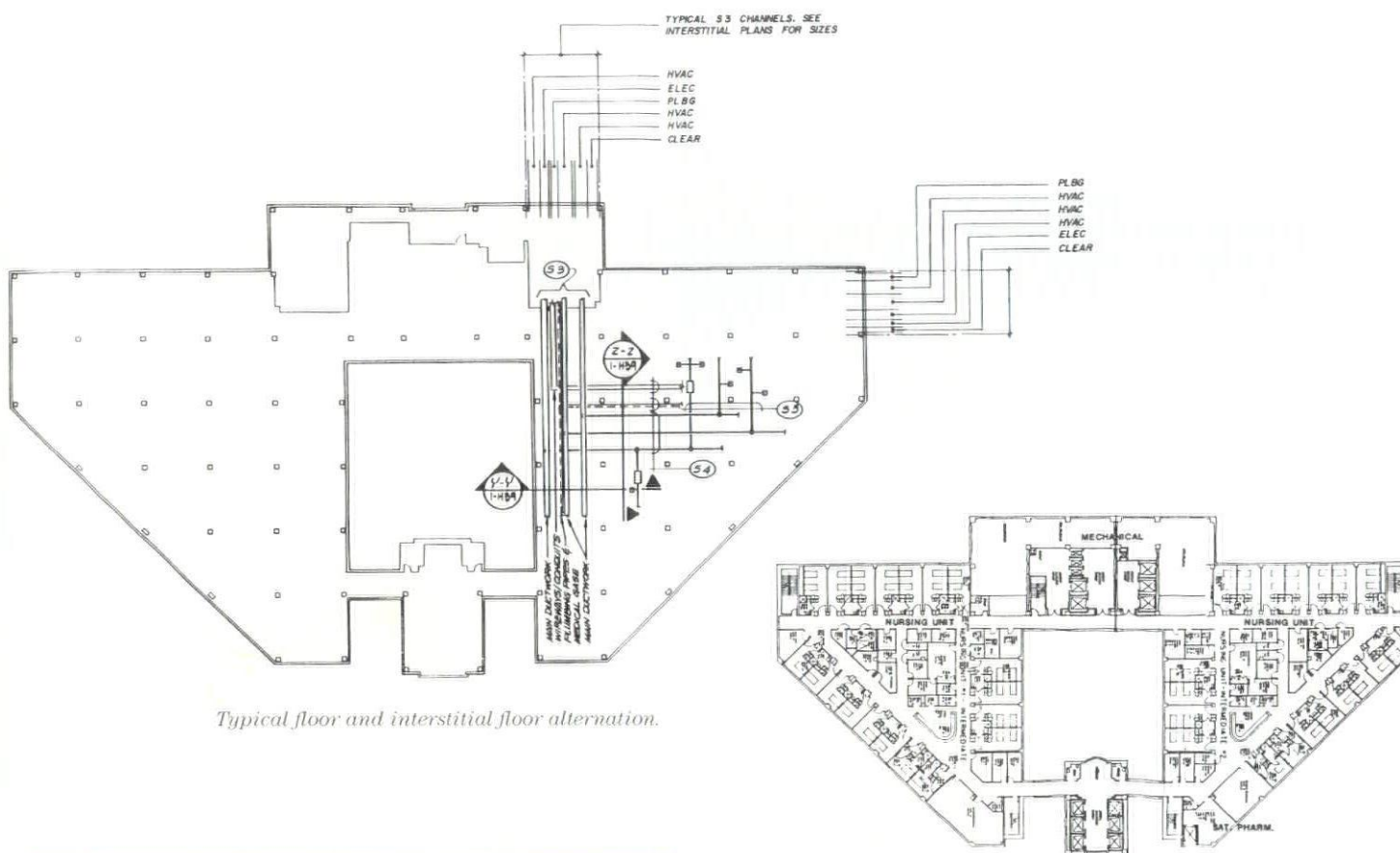
144,000 outpatients annually.

The engineering design team took a creative approach to solving the complex building requirements, incorporating state-of-the-art technologies for building systems and energy conservation. All building systems—HVAC, fire protection,

plumbing, electrical power, emergency power, medical gases, communication, and illumination—are distributed via an Interstitial Space Design. This was accomplished through the development of three-dimensional service modules that could be used repeatedly

throughout the building. Each one-story-high module includes a large scale assembly of building subsystems and is organized by a single independent horizontal distribution network. The interstitial "service zones," located above each floor, are subzoned to accommodate the





Typical floor and interstitial floor alternation.



various building systems.

According to Julio Alvarez, engineer and partner in Wolfberg/Alvarez, this approach to engineering offers numerous improvements to the entire structure and significant advantages to life-cycle maintenance and operating costs. Not only is the efficiency of hospital resources enhanced, but with areas that require routine maintenance located away from patient care areas, normal hospital functions are rarely if ever disrupted.

A dramatic atrium with 80' x 90' skylights and a 10-story vertical window floods the hospital's central core, including patient rooms, with natural light. A second, smaller atrium, located in the five-story west wing, contains a food court designed to resemble an outdoor café. Although spatially different in scale, these two clerestoried courtyards serve as organizational elements between working and public spaces. The 10-story, V-shaped tower rises from a colonnaded entry that

provides a human-scale, pedestrian link to patient areas.

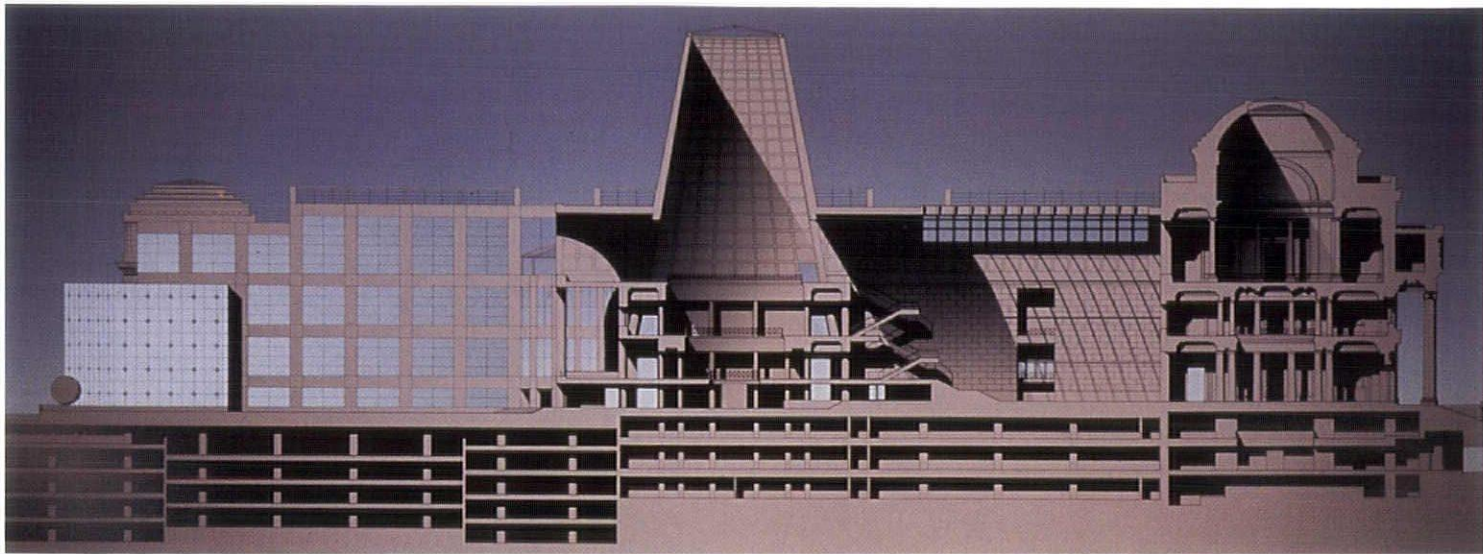
The exterior look was inspired by the architectural vernacular of West Palm Beach. Materials include precast concrete finished in a mediterranean palette of pastel and terracotta tones, with limestone and quartz aggregate detailing. Green-tinted windows were used throughout. Visual interest was maintained through finely scaled fenestration and overall building geometries and a combination of familiar and new shapes and materials.

Even the location has its therapeutic features. Extensive sitework and landscaping of the scenic 69 acres have enhanced its natural beauty. Besides seven acres of wetlands that are being restored, there are quiet patient sitting areas, even bike and jogging paths with exercise stations. Six manmade lakes help make the environs attractive for the community as well as for the patients.

*Photography by Mark Roskams*



# Museum Designs by Distinguished 20th-Century Architects



## Jacksonville Art Museum Jacksonville, Florida September 19–October 10, 1994

Catalogue, with essay by  
William N. Morgan, FAIA

By Diane Greer

**J**acksonville architect William N. Morgan was Guest Curator for a recent exhibition of notable museum designs of the last 50 years. Although most of the museums included in the exhibition, held at the Jacksonville Art Museum, are in the United States, nearly half of their designers were born abroad in places such as Argentina, Estonia, France, Japan, Spain, and Switzerland. What all of the museums have in common is the exceptionally high level of design excellence they represent.

Some of the designs included in the show utilized new ideas while others examined unexplored possibilities of earlier schemes. Several of the designs were for new museums, others envisioned major additions or expansions, and still others encompassed galleries, exhibition spaces, and educational institutions. Most of the museums are situated in urban environments and required

careful integration with existing buildings and civic spaces.

The exhibition focused on the creative process of design, not on the designers themselves. Each architect whose work was included was asked to provide one or more conceptual drawings illustrating his method of creating and communicating ideas. Not surprisingly, says Morgan, "The results are unique and richly diverse."

The works selected for this important exhibition are by no means the only examples of excellent museum designs of the 20th century. Rather, the purpose was to suggest a broad array of ideas presently at work in the art and architecture of museum design.

Media in the show included graphite, colored pencil, ink, pastels, charcoal, gouache, silkscreen, crayon, and watercolor, presented variously on bond paper, Strathmore, sketch book pages, Arches, napkins, file cards, vellum, mylar film, and tracing paper. Most of the drawings are original, but photographic copies were presented in cases where the original documents are either too fragile for exhibition or were otherwise unavailable.

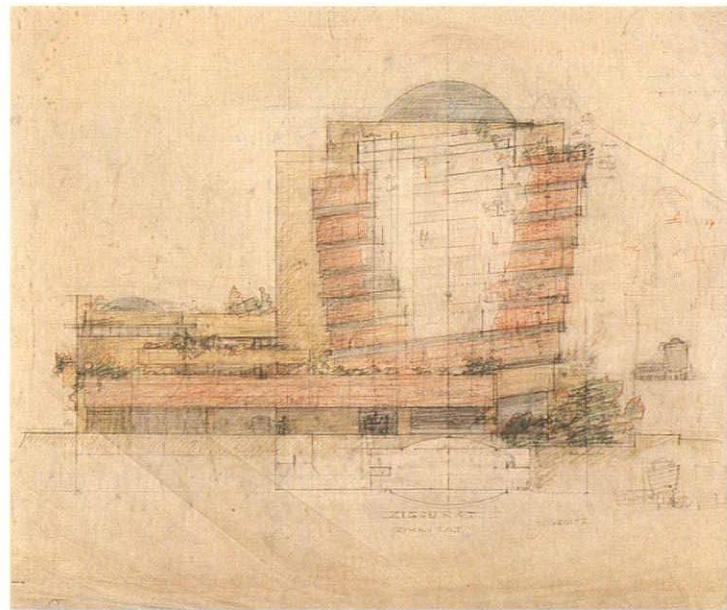
The completion date of each project established the order of

## Brooklyn Museum Addition, 1986

Brooklyn, New York

Arata Isozaki, Architect, with James Stewart Polshek & Partners

*In this competition-winning design, the architect developed an appropriately scaled addition to a historic museum, including a monumental staircase and a gridded titanium cube rotated above the new western gallery.*



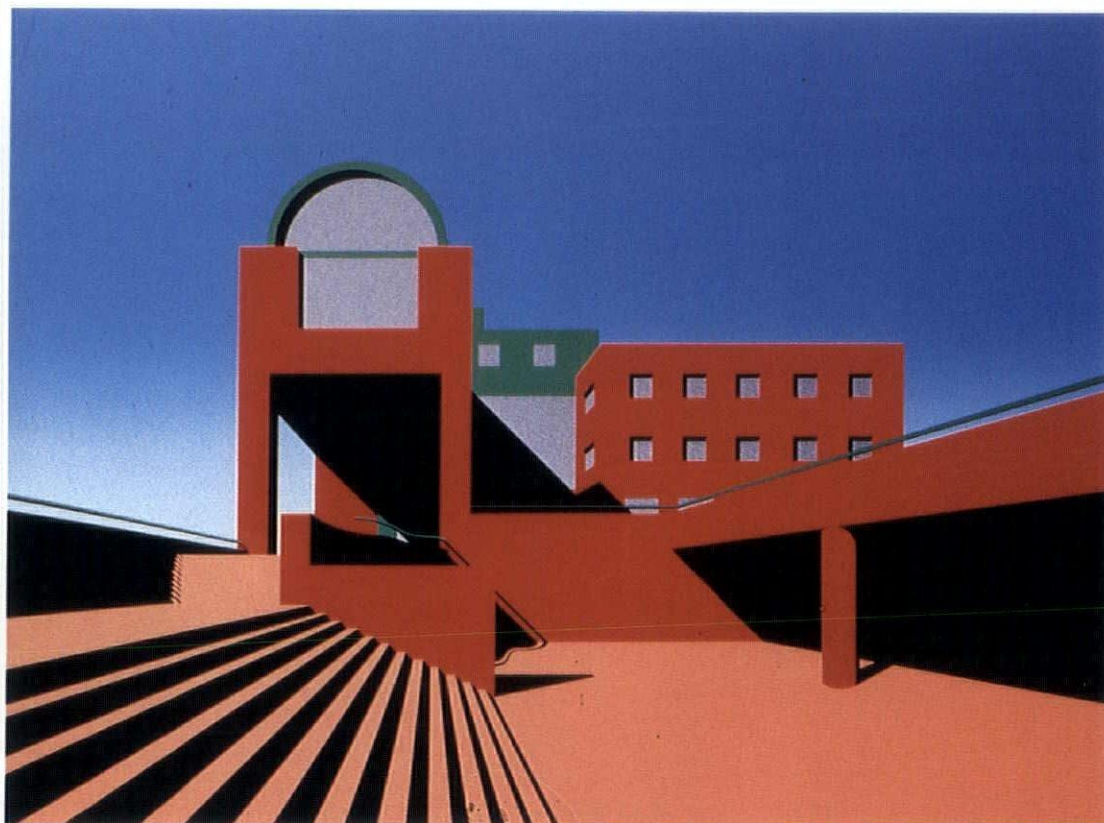
## Solomon R. Guggenheim Museum, 1959

New York City

Frank Lloyd Wright, Architect

*A conceptual section drawn in 1943 reveals Wright's extraordinary vision of an expanding spiral that rises through a continuous gallery and is crowned by natural light. Small sketches appear in the lower right-hand corner; human figures suggest scale, and planting is shown on rooftops.*





*Museum of Contemporary Art, 1987  
Los Angeles, California  
Arata Isozaki, Architect*

*This splendidly crafted museum amidst the skyscrapers of downtown Los Angeles consists of well-proportioned galleries surmounted by pyramidal skylights across a courtyard from a barrel-vaulted library. The building reveals the architect's preference for simple geometric shapes, recalling such structures as Egyptian pyramids and Roman vaults.*

Wright, and one of Louis Kahn's timeless and unsurpassed masterpieces, the Kimbell Art Museum.

In more recent decades, designers have explored a broad spectrum of new directions, often with remarkable virtuosity and brilliance. Given the current high level of achievement in American architecture, curator Morgan assures us that "we may expect to see in the years ahead, an increasing number of distinguished museum designs, and quite likely a few masterpieces, as well."

*All photos by Kathleen McKenzie*

presentation. The chronological sequence was intended to assist the visitor in understanding what possibilities had been explored before subsequent ideas were introduced, and how later ideas may have related to earlier ones.

Several influences guided the development of American architecture in the years following

the Second World War. These included steel-framed glass boxes responding to the discipline of Mies van der Rohe, increasingly sculptural buildings designed by the French master Le Corbusier, and the spirited creations of Frank Lloyd Wright. Wright's works have informed generations of designers since the late-nineteenth century.

During the sixties, however, a spirit of restlessness became widespread in America and elsewhere. The new spirit called for re-evaluation of preciously accepted principles and for exploration of new directions in design. Museums representing the new era include Paul Rudolph's highly creative designs recalling the spirit of

*Nelson Fine Arts Center, 1989  
Arizona State University,  
Tempe, Arizona  
Antoine Predock, Architect*

*In this design, a central plaza suggests a metaphorical desert surrounded by rugged mountains. Throughout the architect expresses his preference for sensory contrasts and for adventure and discovery, rather than for ease of access or clarity of plan.*





*Don't you wish  
we could just do this to CFC*

© 1993 AMERICAN GAS ASSOCIATION

In a way we can—  
if we cool our buildings with  
natural gas.

Natural gas absorption  
cooling equipment cools with  
water, rather than with CFCs,  
which deplete the ozone layer.

It also has fewer moving  
parts than conventional cooling  
systems, which means mainte-  
nance costs are lower.

And, because it costs  
much less to operate, it cuts the  
energy costs of cooling—by  
up to 50%.

There's another big benefit,  
too. It saves electricity during  
the heat of the summer, when  
demand is at its highest.

As a result, we can help  
our cities avoid brownouts.  
And help reduce the need for  
power plants. Best of all, we  
can help America balance the  
use of its energy resources.

No doubt about it, natural  
gas is a high-tech, low-cost  
way to keep cool without  
CFCs.

It's a cool way to help save  
our ozone layer, too.



**C**lean, economical natural gas. Think what we'll save.

**Florida Natural Gas Association**



# Fast Finish

## Checkers Restaurant Tampa, Florida

**Architect:** Spencer and  
Jonnatti Architects, Inc.

**Principal-in-Charge:**

Stephen Spencer, AIA

**Consulting Engineer:**

D.W. Lowe, P.E.

**Design Team:** Mark Jonnatti,  
AIA, Stephen Spencer, AIA

**Contractor:** Champion  
Modular Restaurant Company,  
Inc.

**Owner:** Checkers Drive-Thru  
Restaurants, N.A.

**“F**ast” in the restaurant  
business no longer  
means just the food.

The fast-growing Checkers  
Restaurant chain, founded just  
10 years ago, now numbers  
almost 500 stores. One reason  
is an incredibly fast construc-  
tion system made possible  
with an array of metal prod-  
ucts and a precision-engi-  
neered foundation setup.  
The prototype for Checkers’s  
modular building system was  
designed by Spencer and



Jonnatti Architects, Inc., of  
Largo, Florida.

The system was adopted by  
the Checkers chain in the late  
1980s to replace its earlier  
site-built method. Both man-  
ufacture of the prefabricated  
metal components and installa-  
tion of the kitchen equipment  
are completed at a factory in  
Clearwater. The  
31-ton unit is then  
trucked to the job  
site and hoisted  
by crane onto a  
concrete slab.

Three prefab-  
ricated sections—  
a main one and  
two drive-through  
canopies—measur-  
ing 14' x 48' over-  
all, are then bolted  
together on-site.

A high degree

of coordination is required  
between the civil engineering  
and building construction doc-  
uments because of the close  
tolerance of the foundation sys-  
tem. The “open-for-business”  
sign can go up in seven days.

With no indoor seating in  
the small facility, the interior  
look is entirely functional. The

unique exterior design, which  
has been compared to a 1950s-  
style juke box, is another story.  
Black and white ceramic tiles  
outlined with stainless steel,  
glass block, and lots of neon  
lighting make Checkers espe-  
cially eye-catching after dark.  
The design has been recog-  
nized several times, including  
a 1990 “Night Beautiful Award  
for Imaginative Nighttime  
Lighting” from the Florida  
Department of Commerce.

The lively exterior belies a  
framework of tubular steel and  
metal studs, and a rugged skin  
of ceramic tile around the bot-  
tom with an exterior insulation  
system and finish system  
above. The neon-trimmed  
drive-through canopies are  
manufactured from 20-gauge,  
shop-formed bright annealed  
stainless steel with a #8 mir-  
ror finish. Columns and the  
mechanical equipment roof  
screen are 22-gauge steel,  
shop-formed and coated.

The latest engineering tech-  
nology was applied in creating  
a structure that could with-  
stand winds up to 120 m.p.h.,  
a worst-case scenario for struc-  
tural loading. A “field-test”

came unexpectedly, on August  
24, 1992, when Hurricane  
Andrew destroyed much of  
south Dade County. A new  
Checkers Restaurant was  
scheduled to open there the  
day the hurricane hit. Sustain-  
ing only minor damage from  
flying debris, the store opened  
for business the next day,  
using gas-powered generators.  
As one of the few businesses  
operating in the aftermath of  
the storm, it got off to a big  
start. The major competition  
in the neighborhood was the  
Red Cross mess tents.

Spencer and Jonnatti have  
been approached by several  
other restaurant companies  
to create modular double  
drive-through designs for their  
formats. A design is underway  
for the Quick Pit Corp. of  
Vero Beach, Florida, whose  
NASCAR-themed barbecue  
restaurants will accommodate  
a full-size smoker and a larger  
kitchen. To replace its site-  
built design, Long John Silver’s  
Seafood Restaurant has com-  
missioned a wide prototype  
that will require two half  
modules bolted together.

*Photography by Brenda Nixon*



*Prefabricated section on truck*



## Taking Stock

### Superstock Jacksonville, Florida

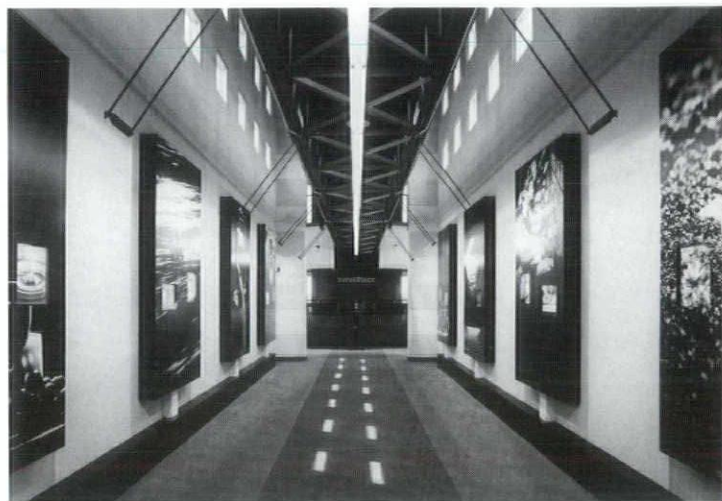
**Architect:** KBJ Architects, Inc.  
Jacksonville, Florida

**Owner:** Superstock, Inc.

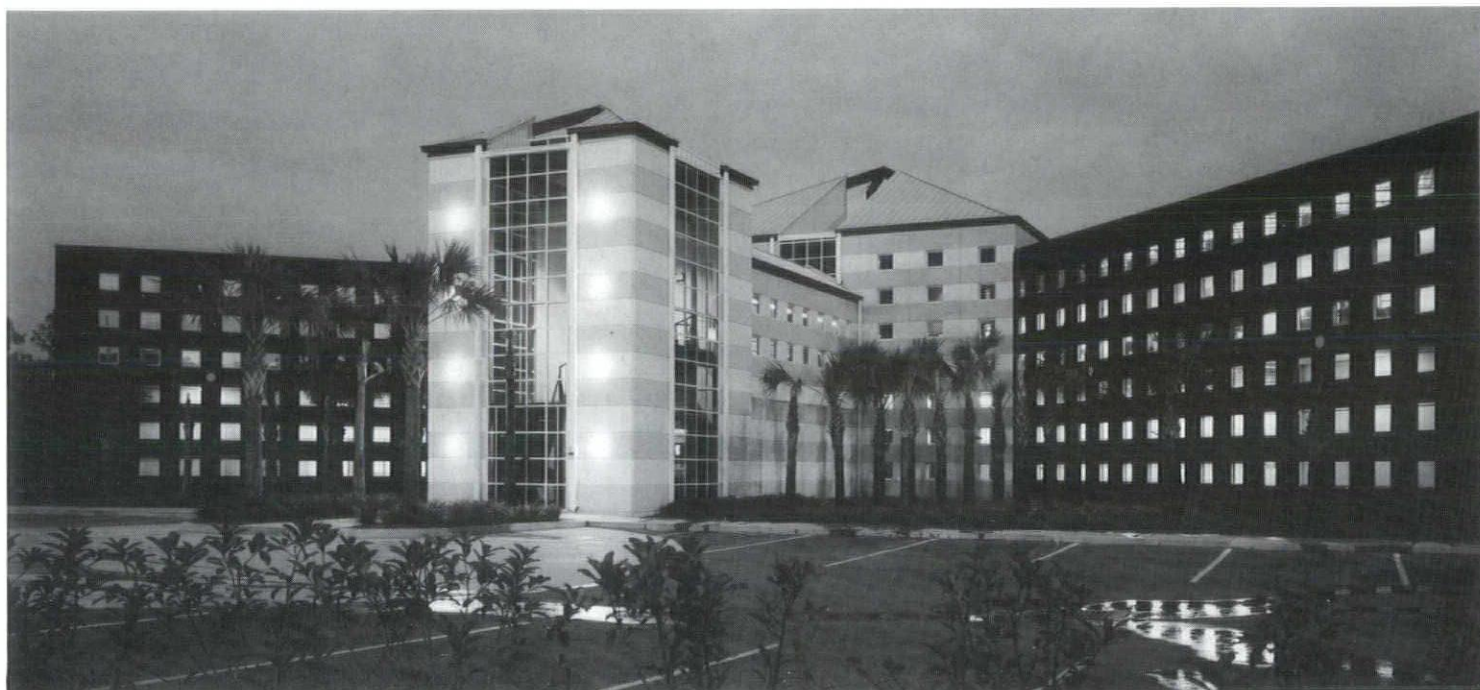
**Developer:** The Beeckler Company

**Contractor:** Elkins Industrial  
Contractors, Inc.

Judged by Princeton architecture professor Michael Graves to be worthy of an Award for Excellence in Architecture, this small commercial project was so honored by the Jacksonville Chapter/AIA at its 1994 Awards Program.

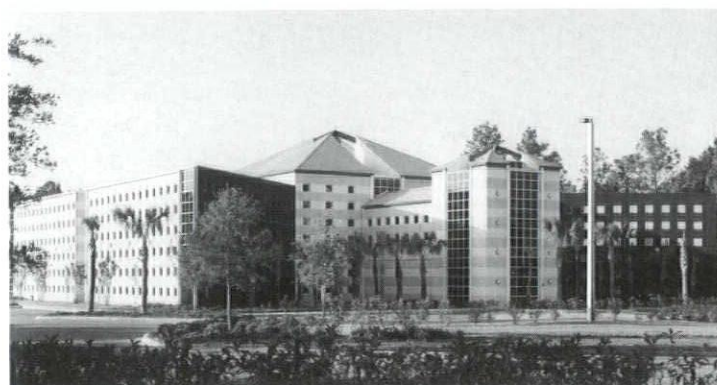


*Interior, gallery*



*Night front*

This building is a 30,000-square-foot corporate headquarters for a stock photography company. Its Jacksonville architects designed the building as an architectural interpretation of a 4" x 5" box camera. The design is a true square, built on axis and inwardly oriented. The black punched exterior walls, with postage stamp windows, feed into the centroid of the space and come out on the other side, extending beyond the interior of the building. The walls are, in effect, an interpretation of film leading into the camera.



*Eye-level front*



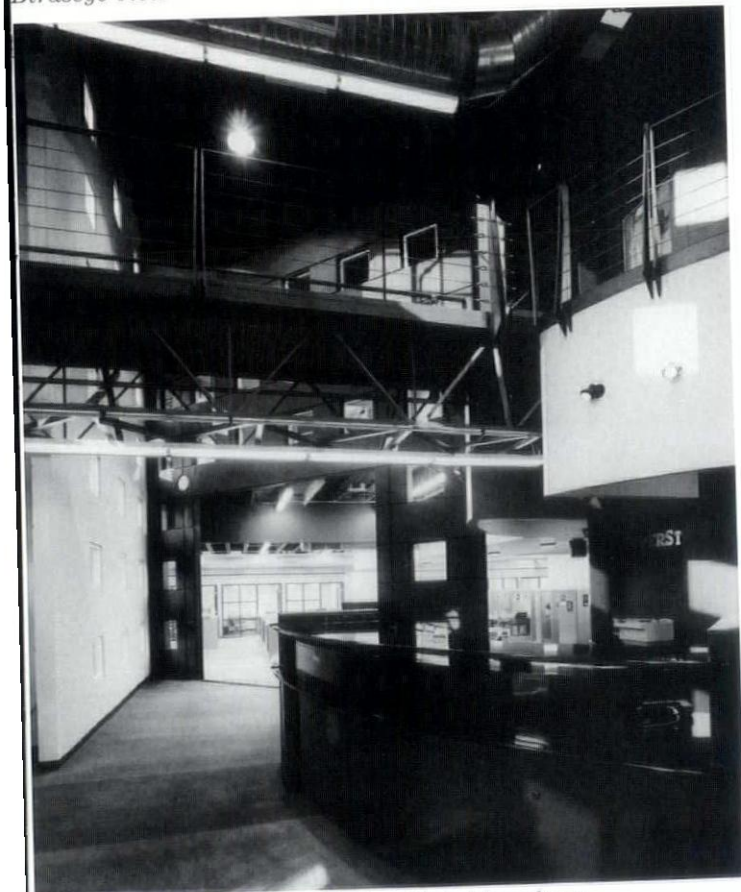


*Birdseye view*

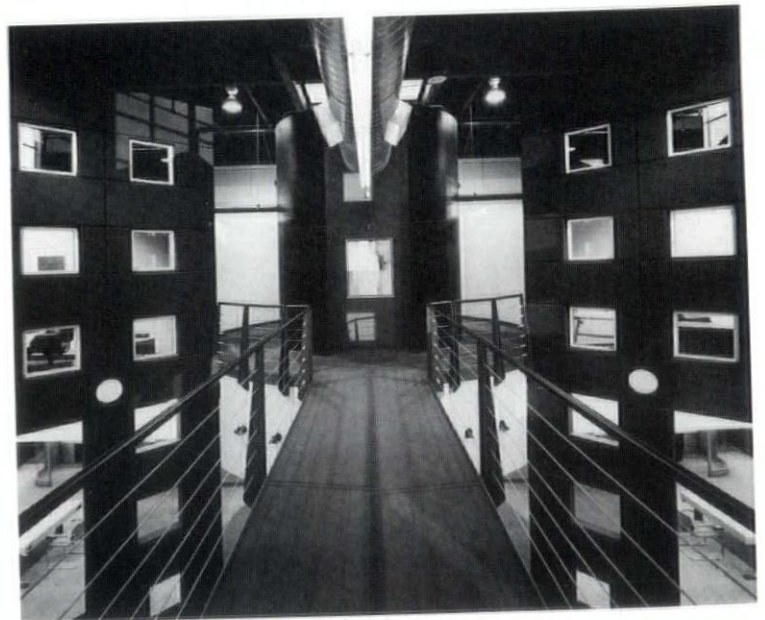
The entrance to the building, which serves as a focal point, was designed as a gallery, with a high ceiling and narrow walls. The company uses this space to display some of its most striking stock photographs. Above the entry corridor gallery is a bridge that extends past the central elevator shaft to the rear of the building. The open interior design allows unobstructed views from the first to the second floor.

Ceilings throughout the building have been omitted so that the mechanical components are exposed and visible. These components were carefully choreographed and enlarged with high pressure ducts for a more dynamic effect. Like a camera, the purpose was to be able to view the inner working parts of the facility. **DG**

*All photos by Timothy Hursley*



*Interior, around reception desk with bridge above*



*Interior, around walkway at bridge*

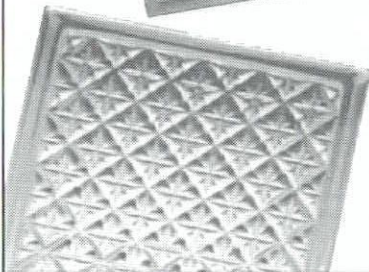
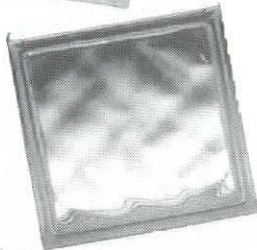
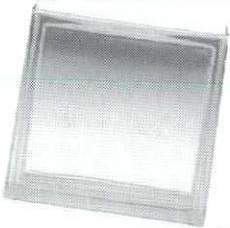


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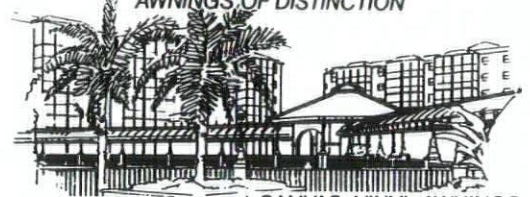
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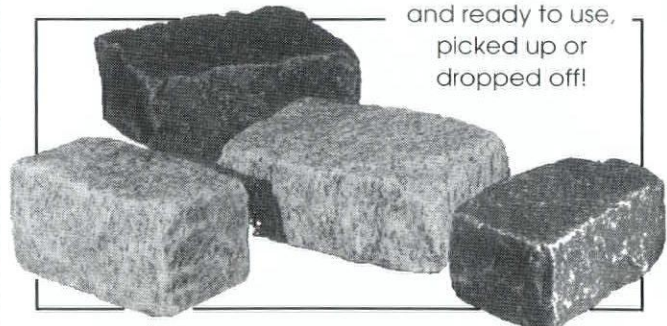
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# FIRM PROFILE

## A Belief in Architecture

### Carl Abbott FAIA Architects/Planners

*When you look at the flow of materials, energy, and effort that goes into building, and the effects of space on people's lives, you understand the importance and power of architecture.*

#### The Principle

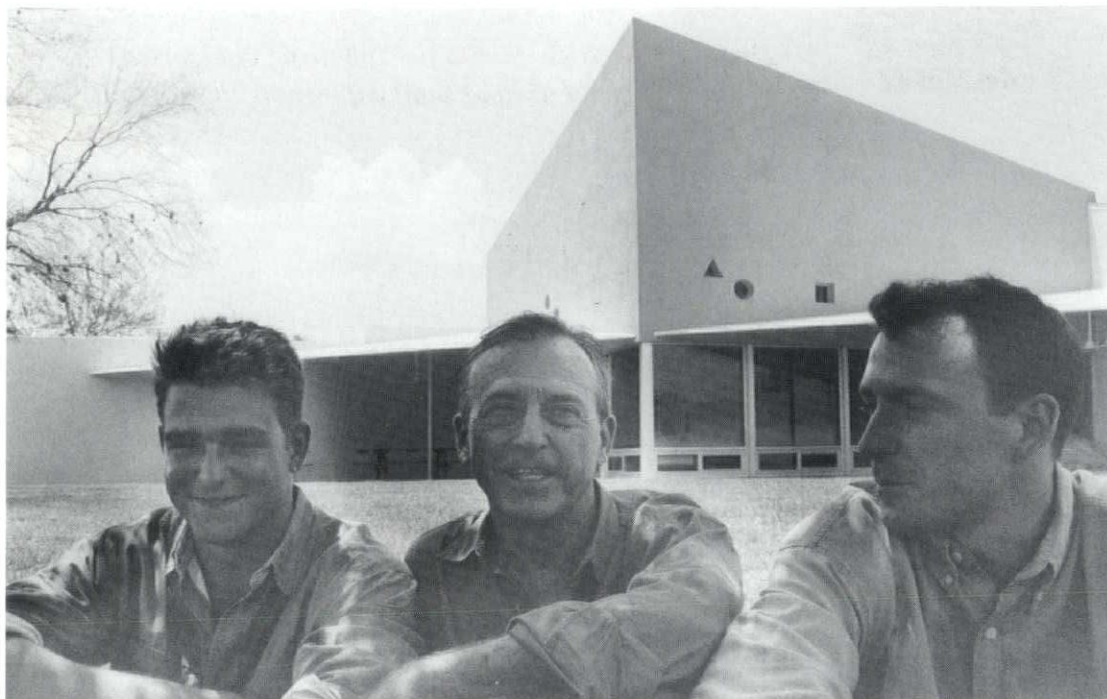
The faith that architecture can shape and improve the quality of life is a tenet of Carl Abbott FAIA Architects/Planners. Design remains a richly evocative process for firm members—one tied to a strong belief in the power of architecture. Individuals in the firm carry on a legacy—both within the profession and with clients—of outstanding design and investigation into the design process.

#### The Preparation

The design education of Carl Abbott was formed from the very beginning by an environmental perspective. After receiving a Bachelor's degree from the University of Florida and a Master's from Yale, Abbott worked in Honolulu, in New York with I. M. Pei, and in London with Norman Foster and Richard Rogers. The process Abbott developed early on, "of seeking spaces of wonder that belong to a specific region" and of recognizing their sense of place and spirit, remains a vital focus of his work.

#### The Team

Design at the Carl Abbott firm is practiced as a true team effort: individuals of many backgrounds and perspectives work toward a common goal. Along with architects, the small, 5-member firm, has included industrial designers, artists, photographers, sociologists, economists, anthropologists, archaeologists, environmental-



Carl Abbott with sons Mark (left) and Cooper (right) in front of Sarasota Memorial Hospital's Child Care Center II. Photo by Gwen Mitchell

ists, and students. If there is a single defining characteristic of the team, it is a developed capacity for creative problem solving within the real-world requirements of time and budget.

Among the architects and designers who have been affiliated with the practice are Mark Smith, Michael O'Donnell, Michael Sheppard, and Joseph King. A key member of the team is Cooper Abbott, vice-president of the firm, whose background in planning, anthropology, and environmental sciences has brought a fresh energy and awareness of contemporary issues to the firm.

#### The Process

Carl Abbott is a believer in the great potential of "design teaming" among firms. "Given the impact of currently evolving technologies," he says, "all viewpoints are needed—big and small firms, architects and planners, voices of experience and

fresh voices. . . Everyone can offer something to invigorate and enhance the design process."

"Architecture and planning," says Abbott, "are unique among professions in the level of synthesis they have the potential to offer. The design process can make different points of view an asset—rather than an adversarial proposition, design is a means for reaching a consensus of sometimes extremely divergent elements. We can all take greater advantage of this."

#### The Credits

Carl Abbott Architect, AIA, was first established in Sarasota in 1966. During 1973-77, the firm expanded and briefly became the Zoller/Abbott/Friedman

Partnership. The latest of many honors conferred on the firm was the 1994 FA/AIA Firm of the Year Award.

#### The Promise

A strong commitment to architecture's responsibility in supporting environmental and social improvement has won for the firm an ever growing base of repeat clients. The Carl Abbott firm continues to dedicate itself to a widely diverse range of projects.





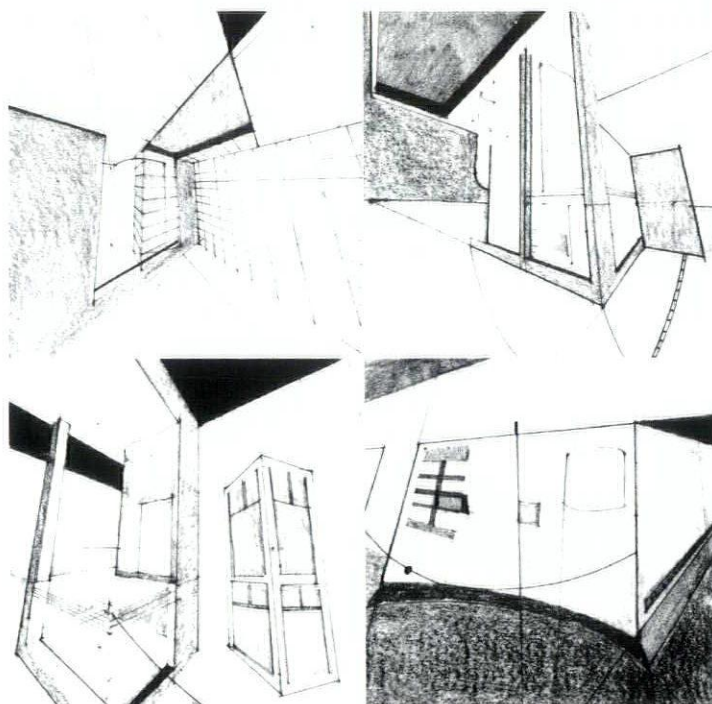
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# LEGAL NOTES

## Sizing the Accessible Toilet Stall for Compliance in Florida

By Larry M. Schneider, AIA

There may not be an official court order, but there is a serious problem, and architects and builders in the state are being warned. Design guidelines for required accessible toilet stalls in new construction, as outlined in Florida's accessibility law, do not meet the federal guidelines for accessibility. This was the recent "guidance" from a U.S. Department of Justice official in response to an inquiry from Metro Dade County.

The Florida accessibility requirements fall short in permitting sufficient space for persons in wheelchairs to maneuver. A quick decision to embrace guidelines for an accessible restroom stall containing an accessible lavatory, found in the 1994 Florida Accessibility Code for Building Construction, could mean trouble. According to Florida's Code, section 4.17.3(2), the stall "shall be not less than 68 inches by 68 inches," and the lavatory "not less than 19 inches wide by 17 inches deep, nominal size, and wall mounted." Further, if the stall is to have a front entry, Florida law requires a 60-inch diameter wheelchair turnaround area be accommodated within the stall.

The problem area, according to U.S. Justice Department Public Access Section Chief John L. Wodatch, in a letter (dated August 8, 1994) to Metro Dade County Manager Joaquin G. Avino, is that the presence of a lavatory within an accessible stall may preclude compliance with the clear floor space requirements. "A lavatory," wrote Wodatch, "within the clear floor space limits access to the toilet to a diagonal approach, and obstructs maneuvering room; therefore, it is not permitted." According to Wodatch, "The text of § 4.16.2 specifies that figure 28, which allows for an accessible lavatory to overhang the clear floor

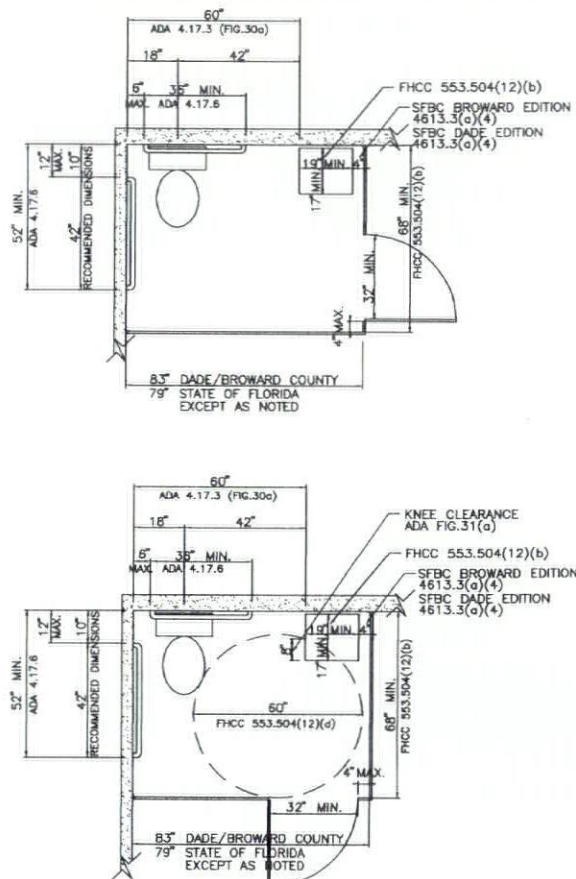
space at the toilet, is to be used only for toilets not in stalls." However, added Wodatch, "ADA Standards do not prohibit the placement of a lavatory within an accessible stall, provided that the clear floor space requirements are met."

It is possible for architects, owners, and builders in Florida to observe both state and federal requirements by enlarging the size of the accessible stall. To do this, it is recommended that the back wall/plumbing wall be a minimum of 79 inches in counties and municipalities that use the Standard Building Code, or a minimum of 83 inches in Dade and Broward counties. The controlling factor for the width of the stall will be the lavatory width.

The Florida Department of Community Affairs submitted the state's Accessibility Code to the U.S. Justice Department for approval in 1994 and is still awaiting an official ruling on compliance. However, the letter of guidance to Metro Dade signals that problems may be ahead for the Florida law.

Larry M. Schneider, AIA, is Chair of the Florida Board of Building Codes and Standards.

### Typical Accessible Toilet Stall COMPLYING WITH THE REQUIREMENTS OF THE FLORIDA LAW AND THE ADA GUIDELINES FOR NEW CONSTRUCTION



#### ASSUMPTIONS:

- 1) ACCESSIBLE WATER CLOSET DEPTH IS 30 INCHES AND IT IS FLOOR MOUNTED
- 2) TOILET STALL DOOR SWINGS OUT AND IS SELF CLOSING (553.504(12)(A)). DOOR CAN BE HINGED ON EITHER SIDE.
- 3) TOILET STALL DOOR WIDTH TO BE A MINIMUM OF 32 INCHES (553.504(12)(D)).
- 4) ACCESSIBILITY TO TOILET STALL DOOR IS IN COMPLIANCE WITH ADA GUIDELINES.
- 5) TOILET ACCESSORIES TO BE PROVIDED.

### Pertinent sections of Florida Accessibility Code for Building Construction (Jan. 1994).

**NEW CONSTRUCTION:** The following requirements [for] size and arrangement shall apply to new construction only:

**4.17.3(2)** The accessible restroom stall shall be not less than 68 inches by 68 inches and shall contain an accessible lavatory within it, the size of shall lavatory to be not less than 19 inches wide by 17 inches deep, nominal size, and wall mounted (see Figure 30(e). Additional stalls shall be provided in conformance with 4.22.4.

**4.17.3(4)** The stall door shall be located in the wall adjacent to the accessible lavatory, as far from the lavatory as possible, or the stall door shall be located in the wall opposite the accessible lavatory if a 60-inch diameter wheelchair turnaround can be accommodated within the stall (see Figure 30(f)). The accessible stall door shall swing outward, shall be not less than 32 inches wide, and shall be self-closing. Such lavatories shall be counted as part of the required fixture count for the building.

### The Americans with Disabilities Act (ADA) guideline reads as follows.

#### 4.17.3\* Size and Arrangement

The size and arrangement of the standard toilet stall shall comply with Fig. 30(a), Standard Stall. Standard toilet stalls with a minimum depth of 56 in. (1420 mm) (see Fig. 30(a)) shall have wall-mounted water closets. If the depth of a standard toilet stall is increased at least 3 in. (75 mm), then a floor-mounted water closet may be used. Arrangements shown for standard toilet stalls may be reversed to allow either a left- or right-hand approach. Additional stalls shall be provided in conformance with 4.22.4.

**EXCEPTION:** In instances of alteration work where provision of a standard stall (Fig. 30(a)) is technically infeasible or where plumbing code requirements prevent combining existing stalls to provide space, either alternate stall (Fig. 30(b)) may be provided in lieu of the standard stall.





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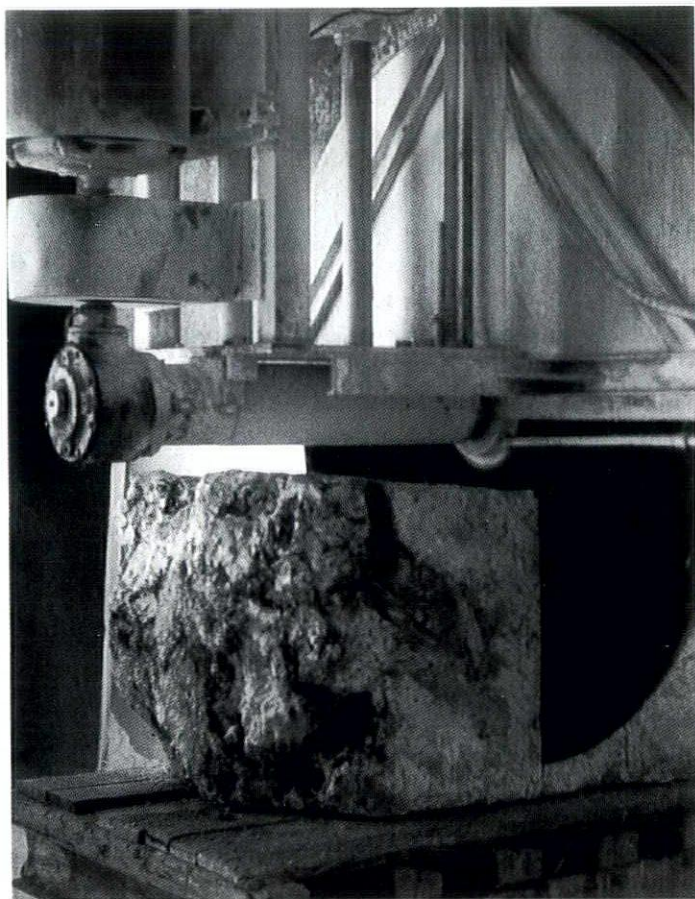


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# VIEWPOINT

## CEASE MOON WALKING

### Accepting Responsibility Is Essential—and Profitable

By Frank McLane, AIA Emeritus

Over the last half of this century, we architect practitioners have witnessed great shifts and changes in design and revolutionary new construction materials and methods. We have witnessed the waxing and waning of the power of the developer to dictate design in our communities. We have experienced the absorption of the computer into most aspects of our profession—from production of design documents to management of construction. We have observed the arrival and departure of “building delivery systems.” We have watched as modern architecture evolved from clarity to confusion, culminating perhaps in the much-copied and admired caricature of architecture in what is really nonarchitecture—amusement park village design.

We have experienced some exciting architectural space—even more that we won't even speak about.

We have even seen the architect become a figure in entertainment, from Howard Roark of *The Fountainhead*, to the owner of Mister Ed the horse, to lovers and moguls whose characters add prestige to the movies and soap operas they inhabit.

More important, we've also seen what a real architect like John Portman can do when the architect is the developer and the synthetic wisdom of “the experts” can be weighed and counterbalanced.

However, we have also witnessed the long-dreary retreat of the architectural profession in general, a retreat that seems never to end. As an architectural firm owner (26 years) and as a public official who employed architectural firms (15 years), I have watched the profession erode and deteriorate. The contributing factors are numerous and varied—low nonnegotiable fees, poor decisions by the insurance industry regarding liability,

the thrust of responsibility onto the backs of owners, and federal “restraint of trade” prohibitions, to name a few. Regardless of the causes, the worst effect on the profession, to my mind, has been a steady retreat from authority and responsibility, a retreat from professional respect. I call it Moon Walking.

In my arrogance, during the early days of a partnership, I proposed to a partner that we stand up to and take a proper professional position with a public-body client with whom our firm had a solid relationship. My partner refused, explaining to me that “architects were a dime a dozen.” Not then, not ever, did I believe that about myself or the quality of the work that bore my name. Nevertheless, I knuckled under.

I once hung a sign in my private office that read, “We know what the costs are to provide top-quality service. Those who can charge less know what their services are worth.” My partners pressured me to take it down. They did not wish any client to think we were high-priced.

These stories are offered to

illustrate two critical problems among architects: not wanting to say “No” to anything, even to a losing proposition, and wanting to appear “competitively priced.” Inevitably, base-level fees have led to reductions in service and in quality—and in acceptance of liability.

Small wonder that with architects accepting fees dictated by the customer they must seek ways to bring the level of services in line with compensation.

Small wonder that with architects being forced to accept unrewarding fees they must seek to reduce their liability.

Small wonder that with current fees barely covering product/services costs, leaving no cushion to bear the cost of liability, architects are joining contractors, subcontractors, and engineers in finding new ways NOT to face construction problems—doing the Moon Walk dance.

Here's the spin. It is much like “reverse English” in the game of pool. When service is reduced, so is the quality of service. And with less quality of service comes a greater risk of error and omission—and greater probable liability. Yet current fees vs. delivered product/services costs leaves no cushion to bear liability costs. Ironically,

the more the design professional tries to back away from responsibility, the greater the exposure to becoming truly responsible.

One of the causes of the profession's long-dreary retreat over the past 40 years has been the development of the professional liability insurance industry. Hindsight suggests that insurance companies, acting in good

faith, have missserved the very professions they sought to protect.

Had the insurance industry promoted adequate spending up front (read: appropriate compensation for the architect and engineer to support sufficient time and resources to do the job right), it could have benefitted from fewer construction claims and smaller settlements and judgments. Even the meanest, most unreasonable negotiator for an owner would not push a negotiation below the point where liability is forfeited.

Worst of all, instead of reviewing each task cost analysis with the architect and declining to insure those jobs for which adequate fees were not negotiated, insurers established programs to teach architects and engineers how to minimize (read: avoid) responsibility. Further, instead of working with owners to help them understand the importance of adequate planning, the insurance industry encouraged the AIA to modify its standard documents, line by line, shifting responsibility to owners and contractors. And since contractors were represented in the rewriting, owners ended up bearing the brunt of the responsibility.

For many years owners have had the need and desire to find someone to accept—or at least share—responsibility. And for the Moon Walking to stop, architects (and engineers) must start accepting a share of the responsibility.

Attorneys who draw agreements between owners and architects (and engineers) can help by rewording standard agreements. I believe it is time for these professionals to stand behind their work, to share in the risk. (Practicing what I preach, in my role as a public official, I was able to influence many such agreements and

***I believe it is time for these professionals to stand behind their work, to share in the risk.***





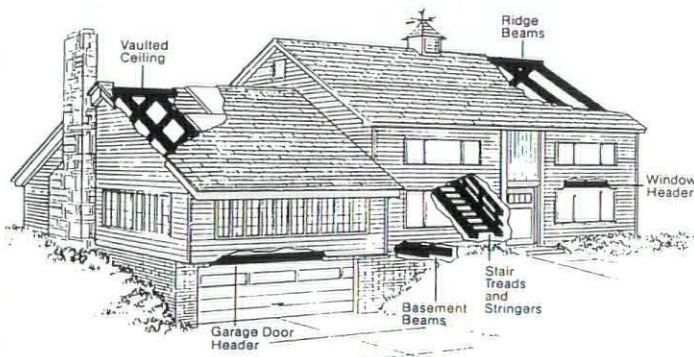


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quate compensation. The day has come when many a large, stable client is hungry to hear, "Here's what I can and will be responsible for." What's more, that client is also ready to hear, "Here's a task cost analysis. And here's the amount I need to be able to shoulder responsibility for these tasks."

If this sounds like a pipe dream, it's not.

It's a question of how. I offer the following example.

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These skilled MEP engineers have the hands-on experience to stand behind their product/services. Likewise, when an architect is in the chain of command, Gold Key service includes a markup (typically

standing between 5% and 10%) so the client gains satisfaction that the occupant's complaints will be resolved by qualified professionals. The idea of selling responsibility—and getting paid adequately for accepting it—is a means of beginning to end the long-dreary retreat.

The architects themselves can identify which particular responsibilities they are willing to accept for additional compensation. A good place to start would be to reword the standard AIA Architect-Owner Agreement, identifying in shop drawings and submittals precisely what the architect will be responsible for. Next, since the architect as well as the architect's engineer will be responsible for work done under the contractor, the architect should establish the right to approve or reject any specific "specialty engineers" and the method of calculations and submittals.

There are, of course, those things for which the architect can not be responsible. But accepting responsibility for those for which he or she can be essential, and even can be profitable. For the day the profession begins to specifically accept responsibility will be the turning point in the long-dreary retreat. The end of Moon Walking will signal a new beginning for respectability and profitability.

*Frank McLane, AIA Emeritus, now writes on issues and observations.*



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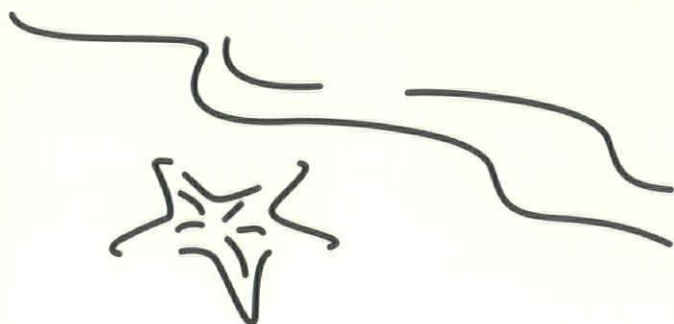
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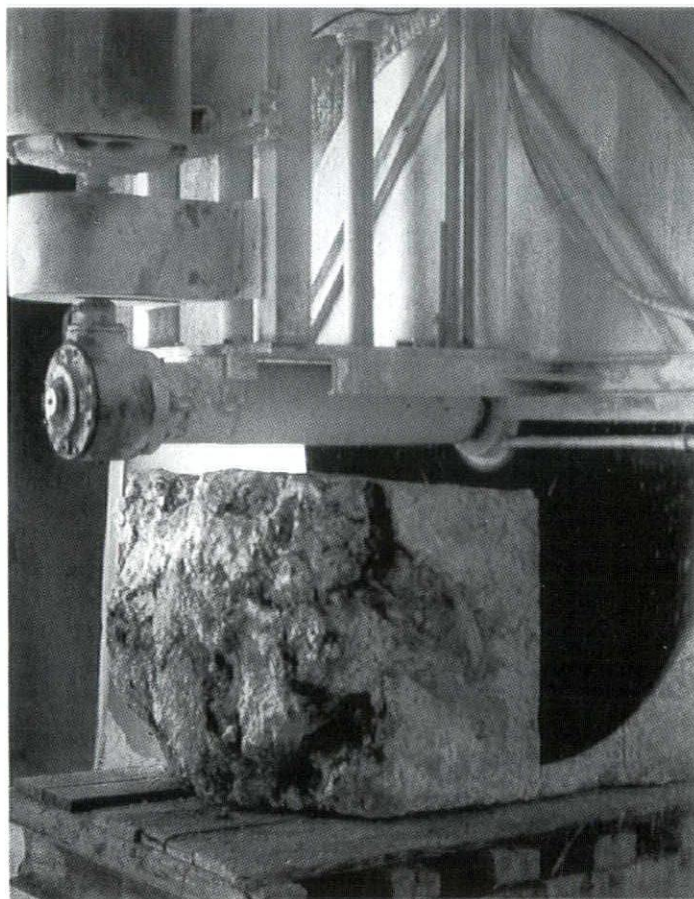
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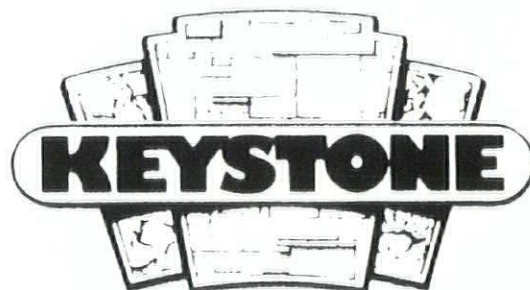
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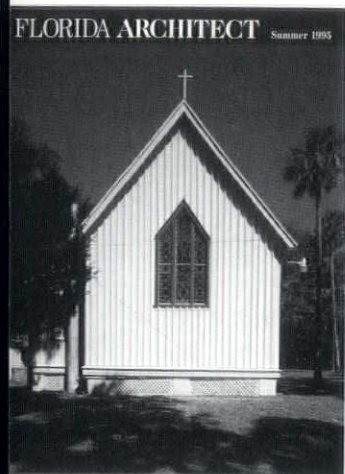
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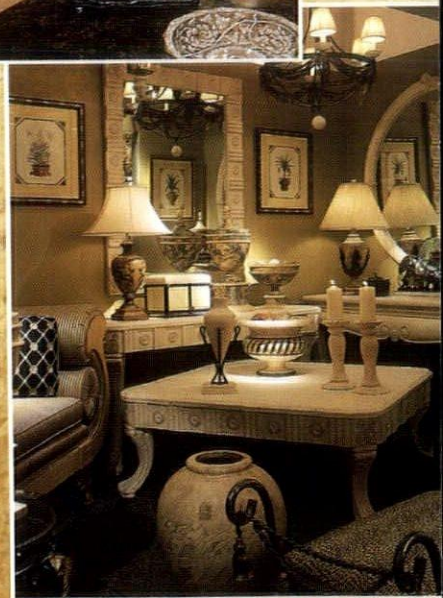
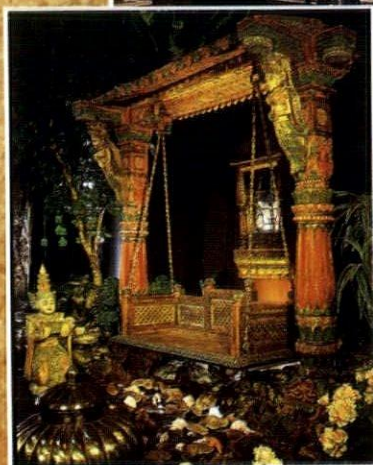
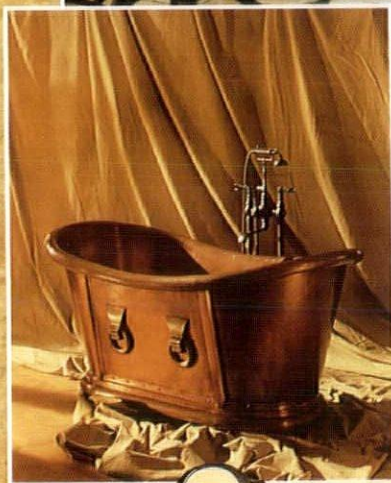
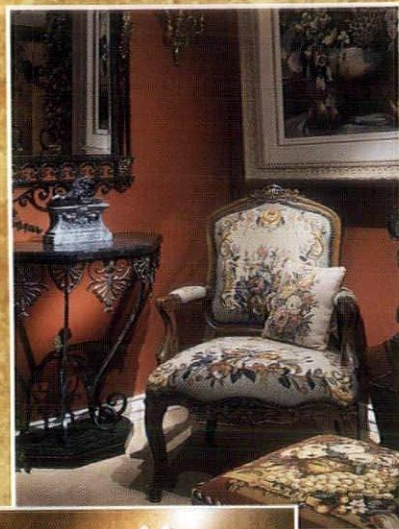
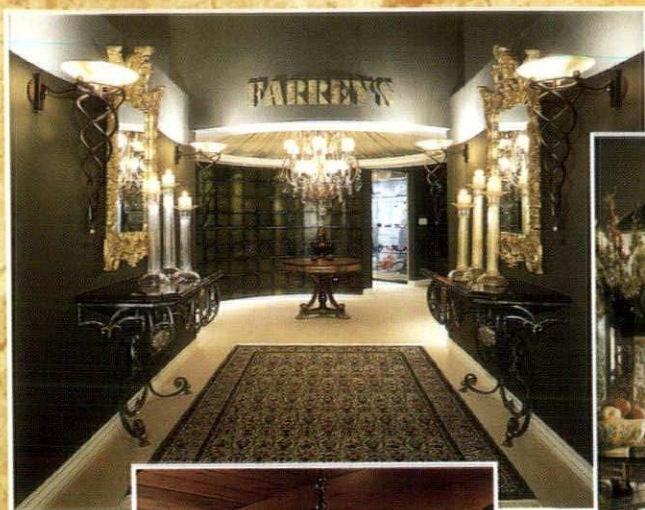
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As part of our observance of Florida's sesquicentennial year, it seems fitting that we sample some of the architecture that has been preserved around the state. Clearly, as described by Vivian Young, diversity was, and remains, the key to our architectural heritage. We also see that a great deal of effort by groups and individuals at all levels has gone into preserving architecture of the past, whether plain or fancy, functional or fantasy, or a vernacular or revival style. Jacksonville architect and University of Florida Distinguished Lecturer Herschel Shepard brings his experience to bear in a discussion of the National Register criteria that will interest every professional with a passion for this pursuit.

For most of the architects doing this kind of work, the abounding challenges are counterbalanced by their enjoyment of the process. Reconciling idiosyncratic building methods and materials with current needs and standards requires as much creativity as a new design. In fact, one of our "historic preservation" projects is a totally new design. For Pan's Garden, a native plant botanic garden next to downtown Palm Beach, Leslie Divoll created an antique-style garden space, incorporating a collection of "recycled" architectural fragments and antique Portuguese and Mizner Industries tiles.

Across the state restored public buildings continue to serve their communities in their functional capacity as well as providing lessons in history. Restored to its Mediterranean Revival dignity by Barger + Dean, the old Edwards Theater is now the Sarasota Opera House. Much of its charm lies in the fact that behind the polish and refinement of its beautifully restored surfaces, a backstage visitor can encounter the real past, for example, in a wall of original exposed rough Georgia clay brick. In Miami Beach, the Art Deco temple that housed the first Jewish congregation in that city has been restored by Giller & Giller and rededicated as the Jewish Museum of Florida. In Tallahassee, on the Florida State University campus, Elliott & Marshall's renovation of turn-of-last-century's Dodd Hall complements its turn-of-this-century addition.

Ken Smith is one of several Florida architects whose restoration projects cover a wide range—churches, courthouses, lighthouses, and every other kind of house. In viewing a few of his projects, one gets a sense of the amount and variety of restoration work out there that needs to be done. And for a look at *how* it is done, Tallahassee architect Trent Manausa describes his practice of "forensic architecture," finding old bugs and fixing them while remaining "historically correct." **MB**

*Florida Architect* serves the profession by providing current information on design, practice management, technology, environment, energy, preservation and development of communities, construction, finance, economics, as well as other political, social, and cultural issues that impact the field.



## Legislature Approves Massive Changes to Educational Facilities

Florida legislators completed their 60-day 1995 Regular Session in May with approval of a massive rewrite of the Education Facilities statute, setting the stage for major changes in the manner in which school buildings will be designed, constructed and approved in the years to come.

Scheduled for sunset if not reenacted by July 1, F.S. Chapter 235 was rewritten following a thorough year-long review by many committees and organizations, including AIA Florida. The basic tenor of the changes made to the statute was to provide more autonomy to local school districts. At the urging of newly elected Florida Education Commissioner Frank Brogan, legislators sharply reduced the number of staffers in the Office of Educational Facilities, shifting responsibility for surveys and plans review to the local level. School districts may still request a Phase III plans review from the state level but are free to approve all phases if they wish to do so.

Architectural services for school designs still will be competitively selected under the Consultant's Competitive Negotiation Act, but school districts may also use a varied array of project delivery processes. Under the revisions, a school district may contract for architectural services to utilize the plans and specifications prepared in another county without going through the CCNA process.

A section was added to the statute allowing the Department of Education to develop school plans, but the program was unfunded. AIA Florida succeeded in amending the provision to require that the DOE utilize a registered architect/consultant



## Florida's First Chancellor

Ellis W. Bullock, FAIA, of Pensacola, began his term as Chancellor of the College of Fellows early, after the resignation of Robert Coles, FAIA. Bullock, a past president of AIA Florida and Vice President of the Institute, began serving in April 1995 and will serve through 1996. He is the first Fellow from Florida to serve as Chancellor.



*New Fellows (left to right) John J. Diamond, FAIA, Stephanie Ferrell, FAIA, and David M. Harper, FAIA.*

to prepare the prototypical plans when and if the program is activated. The provision is permissive, and Commissioner Brogan indicated to AIA Florida that he only expects to utilize such a program to benefit smaller school districts that may need help in the future.

The provision regarding schools being constructed to serve as fallout shelters was amended out, and the Department of Community Affairs was required to establish a statewide emergency shelter plan which would provide school districts with guidance in determining which schools need to be constructed as shelters to correspond with the plan.

## Practice Act Amended

The Florida Legislature approved changes to the Architect and Interior Designer Practice Act during its recent 60-day

session. Chapter 481 Part 1, F.S. was amended initially to reinstate the two-year junior college interior design education program and to allow provisional licensees to take a continuing education program in lieu of a test on building code and barrier free code requirements to qualify for full licensure.

AIA Florida succeeded in getting approval for amendments to the statute affirming that architects have all the rights and privileges necessary to offer interior design services. Architects also may obtain an interior design license if they so choose, but the law now preempts any city or county government from disallowing an architect from consideration for interior design work.

Legislators redefined "interior design" to specifically exclude design of or responsibility

for architectural and engineering work. Also included in the act are a broader definition of what that work includes and definitions for terms such as "nonstructural element," "reflected ceiling plans," "space planning," "common areas," "diversified interior design experience" and "interior decorator services."

## Ca' d'Zan To Be Restored

Ca' d'Zan, the former residence of John and Mable Ringling, is undergoing a \$5.8 million restoration. Nationally recognized preservation architects Ann Beha Associates, of Boston, Mass., are gearing up to begin the first phase of a five-year plan. Tampa architect Jan Abell, FAIA, will serve as local liaison for the project.

John Ringling was a successful business magnate and early developer of the resort colony at Sarasota, in addition to being a founding member of the Ringling Brothers Circus. He was also one of the country's major art collectors in the early-twentieth century.

"This is by far the most important project we will undertake at the Ringling Museum in the coming decade, and a restoration project in which all the people of Florida can take pride. We look forward to a fruitful collaboration," says David Ebitz, Director of the Museum.

## Home Safe Project

The Palm Beach Chapter of AIA is developing plans for a \$1.1 million facility that will be used by authorities for temporary housing for severely abused children in the Palm Beach County area. A group of twelve Chapter members is involved in designing the one-story, 9,200 sq. ft. facility, which will have a residential appearance.

*Please turn to page*



## Reader Survey Results

As *Florida Architect* experienced organizational, staff and layout changes during 1994, one question frequently arose: "What do the readers want from *Florida Architect*?" In early February 1995, a reader survey was broadcast-faxed and mailed to 700 AIA firms throughout the state. A dozen questions inquired about such diverse concerns as reader interests, the current level of satisfaction

and the type of audience desired for the magazine.

Response was rapid. Within 72 hours headquarters counted a 27% response rate, with the overwhelming majority of readers expressing general satisfaction with the magazine. It was clear that the readership preferred that *Florida Architect* inform architects about the profession, with a smaller but significant group interested in

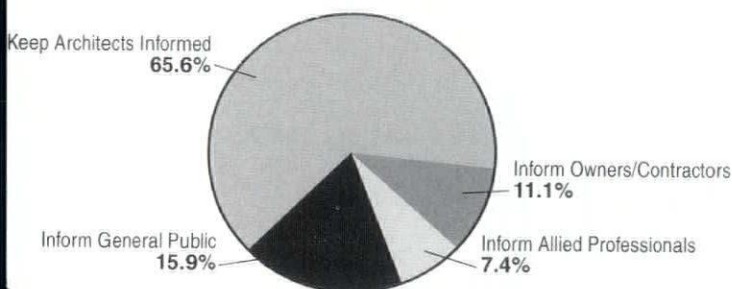
directing the magazine's focus toward the general public. The graphs best indicate the level of interest on specific topics.

Comments, suggestions and satisfaction indicators gave the magazine staff a wealth of information to support decisions and provide feature ideas in the years ahead. Two clear areas of concern which did

emerge were that more than just a "select few" architects should be published, and that more "good projects from less densely populated areas" should be considered.

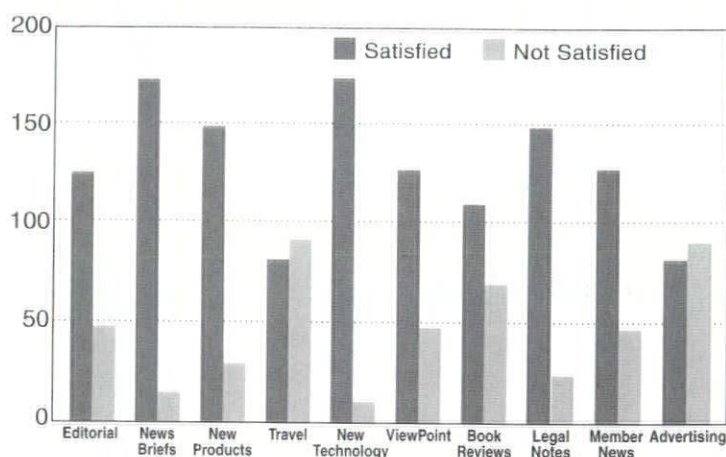
(ED. Tell us about these good projects so we can recognize them.)

**Readership Survey**  
*Florida Architect*  
Conducted Jan/Feb 1995; 27% response

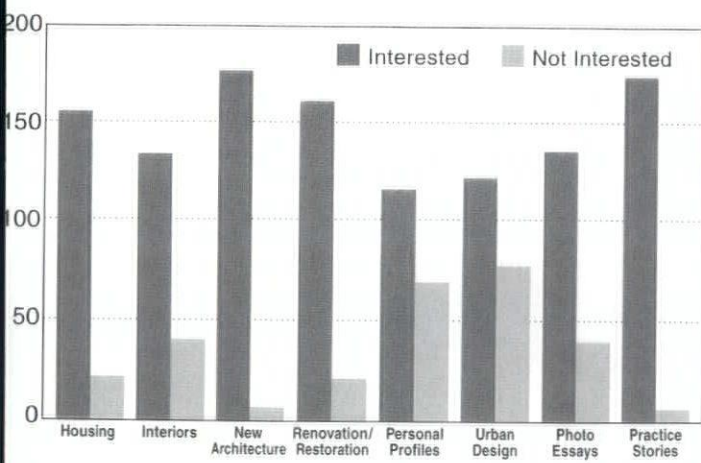


### Vision for Magazine

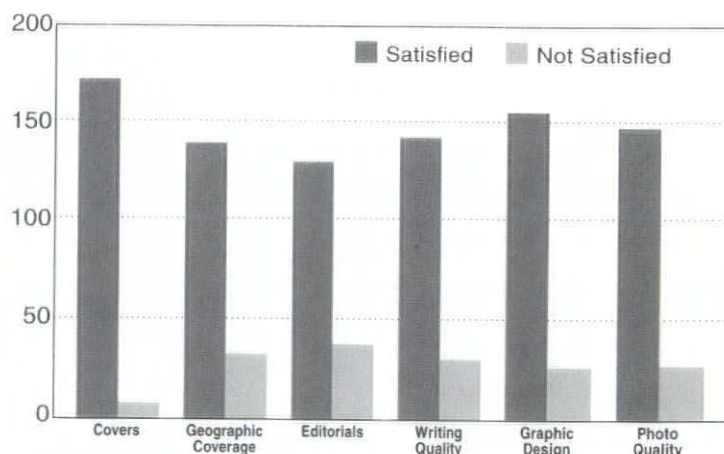
Keep Architects Informed	124
Inform General Public	30
Inform Allied Professional	14
Inform Owners/Contractors	21



Editorial	126	48	ViewPoint	128	48
News Briefs	170	13	Book Reviews	107	67
New Products	149	29	Legal Notes	149	25
Travel	83	93	Member News	129	47
New Technology	173	11	Advertising	80	89



	Interested	Not Interested
Housing	157	22
Interiors	136	40
New Architecture	178	9
Renovation/Restoration	163	22
Personal Profiles	116	65
Urban Design	121	69
Photo Essays	138	39
Practice Stories	174	8



Departments	Satisfied	Not Satisfied
Covers	169	8
Geographic Coverage	139	34
Editorials	132	39
Writing Quality	142	32
Graphic Design	155	26
Photo Quality	148	28



*Continued from page 6*

Programs will serve children who have been sexually and/or physically abused. Medical, law enforcement, and HRS officials would see children at the facility rather than taking them from agency to agency. An umbrella

committee of the Home Safe Board of Directors is conducting a fund raising campaign to raise the needed \$1.1 million. Contact Board member Jim Anstis, FAIA, to participate or make a contribution.

## Awards for Excellence Selected

The AIA Florida 1995 Design Awards for Excellence in Architecture projects were selected May 5 in Atlanta by a jury made up of Peter Q. Bohlin, FAIA,

Lloyd Bray, AIA, and Greg Peirce, AIA. The jury selected the following projects, which will be published in the September issue of *Florida Architect*:

### ***Astronauts Memorial Foundation Center for Space Education***

Architect: Hellmuth, Obata & Kassabaum, Inc.

### ***Pinecrest Elementary School***

Architect: Martinson Forbes Architects

### ***Residential Restoration and Addition to a 1922 Addison Mizner house***

Architect: Smith Architectural Group, Inc.

### ***Moor/Juckiewicz Residence***

Architect: Moor & Associates, Architects, P.A.

### ***Tampa Museum of Art***

Architect: Alfonso Architects, Inc.

### ***Dorothy F. Schmidt Arts & Humanities Center***

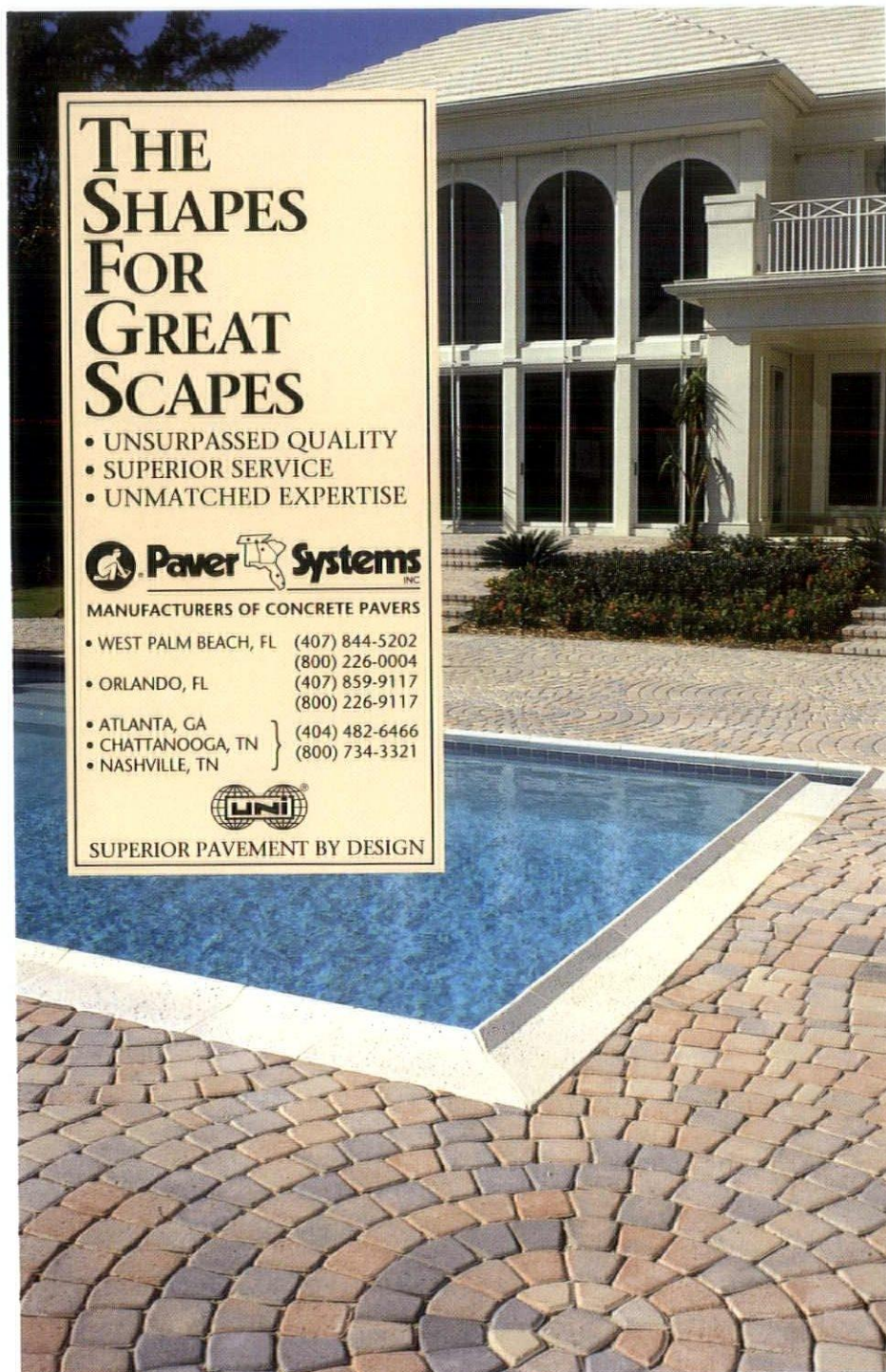
Architect: Schwab, Twitty & Hanser

### ***Three-acre housing development with 23 detached houses***

Architect: Andres Duany & Elizabeth Plater-Zyberk Architects and Town Planners

The 1995 **Firm of the Year Award** goes to Hunton Brady Pryor Maso Architects, of Orlando. The jury selected from six submittals the firm whose collected body of work was found to be deserving of the prestigious Firm Award. Members of the jury included Carl Abbott, FAIA, of Carl Abbott FAIA Architect/Planners, P.A.; William Lindner, Secretary, Florida Department of Management Services; Robert Friedman, Associate Vice-Chancellor, Office of Capital Programs, State University System; and James Dehaven, President, Dehaven-Brett Equities.

This year the **Test of Time Award** will go to Lemontree Village, Coconut Grove, by



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Charles Harrison Pawley, FAIA. Lemontree Village, completed in 1970, is a development of multifamily duplex townhouses and is one of the first uses of planned area development in which buildings could be moved around to take full advantage of on-site trees. The flexible design has been recognized with local, state and national awards over the years. The Test of Time Award is presented for distinguished architecture, recognized for its timelessness of design and influence on other architecture.

## Gerken Chosen for the Gold

Carl Gerken, AIA, Ormond Beach, will be presented with the State Association's highest award, the Gold Medal, at the annual meeting in Palm Beach on July 29, 1995. The nomination was made by the Gold Medal Nominating Committee, headed by Ted Pappas, FAIA, and was ratified by the Board of Directors at their meeting in Atlanta, May 6. Gerken was selected for his outstanding and consistent service to the profession for the past twenty-five years. In particular, the committee noted Gerken's leadership during the 1970s when the State Association underwent many changes and its headquarters were relocated to Tallahassee. Gerken, the current chair of the Board of Architecture and Interior Design, served as president of AIA Florida in 1979. His nomination for the Gold Medal noted his years of dedication to AIA Florida and to the profession of architecture.

The Board also voted to award the **Hilliard T. Smith Silver Medal for Community Service** to Enrique A. Woodroffe, AIA, of Tampa. The Tampa Bay Chapter nominated Henry and applauded his efforts to improve the quality

of life in the Tampa community. He has assisted with policy issues and fund raising for numerous projects and has been active in legislative issues at the state level.

The **Anthony L. Pullara Individual Award** will be presented to Herbert R. Savage, AIA, Marco Island. Herb is a member of the Florida Southwest Chapter, and has dedicated many years of leadership and service to the profession. Herb is a past president of the association and a current trustee of the Florida Foundation for Architecture and has made a significant impact on increasing membership at the chapter level.

The Award for Honor in Design Committee nominated

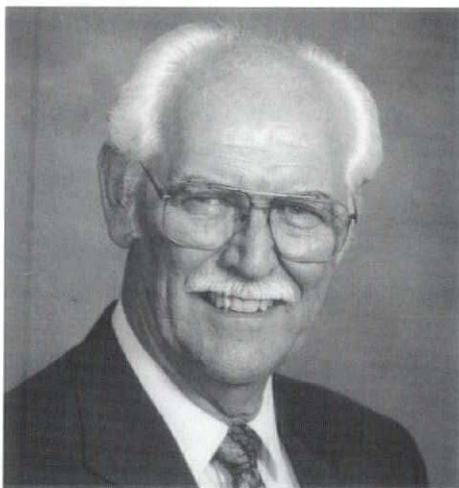
Edward J. Seibert, AIA, Sarasota to receive the **Award for Honor in Design**. Seibert has a proven record through his designs of a special sensitivity to Florida Gulf Coast culture, environment, history and architecture. The committee noted Seibert's recognition, during his career, of the need to nurture interns and young architects, which added further to the excellence of the architecture.

The Board of Directors also voted to recognize three allied professionals for their contributions to the profession. The **Architectural Photographer of the Year Award** will be presented to George A. Cott, Chroma, Inc., Tampa, for outstanding work performed during 1995. The architectural photo-

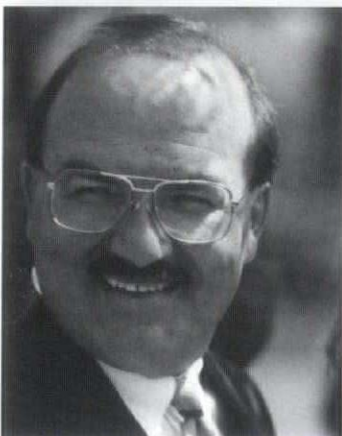
graphy of Mr. Cott has been recognized again for quality and creativity in advancing the profession of architecture.

The **Outstanding Builder Award** will be presented to Wass-Phillips Construction Company, Miami. The nomination noted that this company has become known throughout the Miami area for its quality workmanship, teamwork and outstanding problem-solving abilities. Support for the nomination included the Miami Chapter and local architects.

Sandra Warsaw Freedman, past mayor of Tampa, will receive the **Bob Graham Architectural Awareness Award**. AIA Tampa Bay nominated Ms. Freedman in recognition of her extensive efforts to improve community life in Tampa. She led the work to revitalize neighborhoods in Tampa with an emphasis on housing, law enforcement, growth management, citywide recycling and water conservation programs. She organized public-private partnerships with local lending institutions and private nonprofit agencies to create the *Mayor's Challenge Fund*, which has won recognition as one of the nation's most creative housing programs.



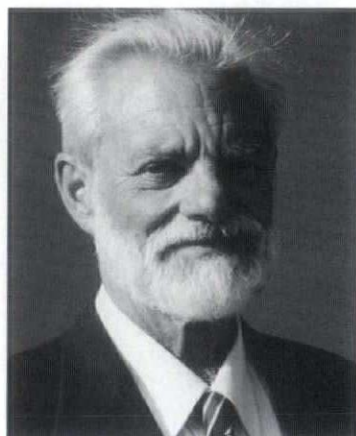
Carl Gerken, AIA  
Gold Medal



Enrique A. Woodroffe, AIA  
Silver Medal



Herbert R. Savage, AIA  
Individual Pullara



Edward J. Seibert, AIA  
Honor in Design



# In Celebration of Florida's Sesquicentennial

By Vivian Young

From earliest European contact, La Florida—the land of flowers—has been a state of adventure, of hardship, and of promise. All of these facets are melded into the historic architecture of Florida. From modest pioneer homesteads to opulent fantasy mansions, historic buildings reflect Florida's unique heritage.

Communities are gearing up for the Sesquicentennial, as this year Florida celebrates its 150th anniversary of statehood. From a rural, agricultural state with a sparse population of 70,000, Florida today is rapidly growing and cosmopolitan, with over 13.6 million people and an economy that rivals that of many nations. As Floridians zoom along the interstates, abandoned farmhouses and decaying crossroad stores tell stories that few now recall. Lighthouses and railroad stations, once Florida's lifelines to civilization, are little more than quaint reminders of the past. The Sesquicentennial provides an exciting opportunity to look back at those historic resources that tell part of the story of Florida's development.



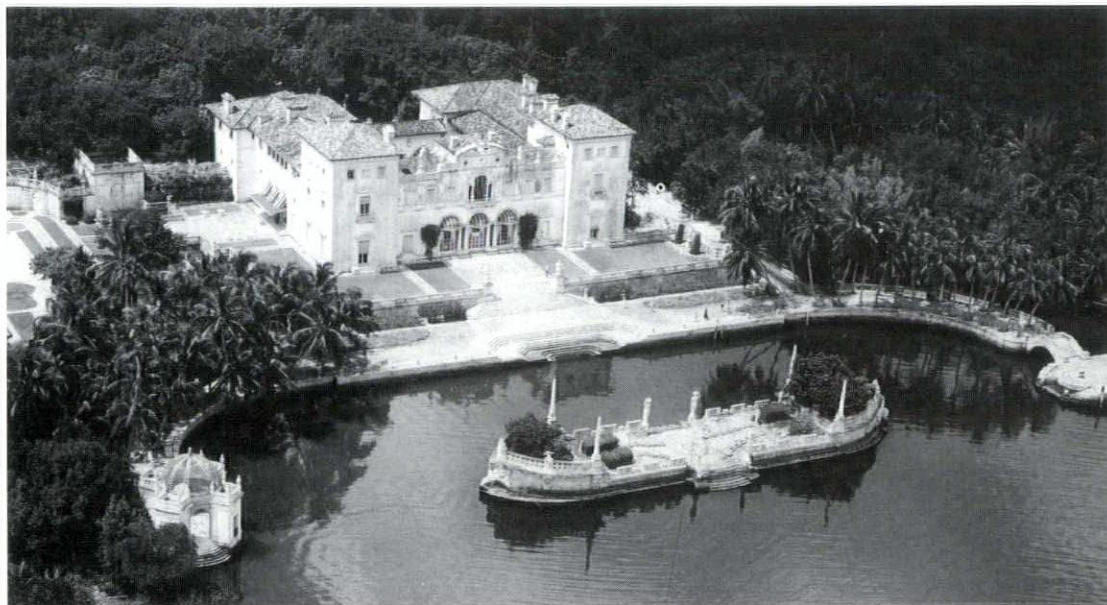
*The Lake Mirror Promenade, designed by Charles W. Leavitt and completed in 1926, shows Lakeland's adaptation of the City Beautiful movement. Photo: Division of Historical Resources, Florida Department of State*

Florida's early architecture reflects adaptation to its steamy climate and indigenous building materials. Beginning with the Spaniards and British, settlers found the durable coquina, a natural lime and shell conglomerate from Florida's shores,

admirably suited for construction. Native longleaf pine, once blanketing the northern half of the state, provided plentiful lumber for many a pioneer homestead. Early on, builders learned the benefits of high ceilings, cross-ventilation, and

good building orientation, taking advantage of wafting breezes for natural relief from the sweltering heat.

Early Floridians were followers in architectural design. Most built utilitarian shelters using locally available materials. Accounts abound of pioneers' primitive log cabins. As settlers became more established, so did their homes—more permanent vernacular structures, often raised on piers, with wood siding and sheltering porches. "Florida Cracker" buildings appeared throughout the state into the 1900s. Some areas developed distinctive vernacular variations. In Key West, influences from the Bahamas and other tropical ports led to the "conch" house—characterized by verandas, louvered shutters, and deep eaves. At the other end of the state, Pensacolans favored the simple yet elegant raised "Gulf Coast" cottage with broad, overhanging roof.



*F. Burrall Hoffman and Paul Chalfin designed Dade County's Italian Renaissance masterpiece, Vizcaya, begun in 1914. Photo: Division of Historical Resources, Florida Department of State*





*Carrère and Hastings's St. Augustine masterpiece, the 1888 Ponce de Leon Hotel, was one of Florida's first "fantasy" buildings. Photo: Tommy L. Thompson, 1992*

Few architect-designed buildings existed in early Florida—most settlers built what they remembered from their native state. Following the example of Thomas Jefferson and others further north, those attempting an architectural style often chose Classical Revival—sometimes with impressive results. Symbolically appropriate for a new country filled with promise, Revival styles symbolized the lofty ideals of democracy and enlightenment. They could also be fairly easily copied from design books and did not require elaborate millwork difficult to obtain in frontier areas.

With its emphasis on symmetry, and Classical columns often in the form of a portico, the Greek Revival style became popular for churches, plantation houses, and other early Florida landmarks. Florida's first masonry capitol building, designed by Cary Butt of Mobile, Alabama, was completed just in time for Florida's 1845 entry into the union. Greek Revival structures remained popular throughout the antebellum period.

Most Floridians, of course, did not live in mansions. In 1860, just prior to the outbreak of the Civil War, over 40 percent of Florida's population

of 140,000 were slaves. Little still stands as built testimony to how the slaves lived, except perhaps the tabby quarters at Kingsley Plantation in Duval County. It is only through archaeology and the written record that we can begin to patchwork this aspect of Florida's history together.

The aftermath of the Civil War threw the South into economic, political, and social upheaval. Construction slowed dramatically. When it picked up again America headed in a new architectural direction. A Romantic movement swept the nation, rejecting formal Classicism in favor of more eclectic

design. The new styles had Medieval and Renaissance models as their inspiration. Nationally, designers such as Andrew Jackson Downing had begun publishing books highlighting these new styles in the 1840s. By the 1870s picturesque Gothic Revival churches and Italianate homes dotted Florida's landscape. By the 1880s the Queen Anne style had become popular. With its irregular massing, ornate gingerbread detailing, dominant porches, and turrets, it represented American architecture at its most playful. Some structures were designed by

*Please turn to page 12*



# Florida's Sesquicentennial

*Continued from page 11*

architects, but many were the work of the owner and builder, perhaps assisted by an architectural pattern book and the local sawmill.

A few farsighted entrepreneurs embarked in yet another direction, "Florida Fantasy." The state's reputation as a winter retreat for the wealthy and the ill was established by the 1870s, as promoters successfully extolled the beautiful climate and cheap land. Two wealthy northern industrialists, Henry Flagler and Henry Plant, opened up much of the state for development. In love with the climate and enthralled with St. Augustine's Spanish heritage, Flagler commissioned New York architects Carrère and Hastings to build a hotel appropriate for the historic city. It opened in 1888—a flamboyant Spanish concoction of local coquina with Tiffany windows and all the opulence any visitor could desire. Flagler next began acquiring rail lines, forming the foundation of his Florida East Coast Railroad. Not to be outdone, Plant established the South Florida Railroad and in 1891 opened his own Moorish fantasy hotel in Tampa. As the competing rail lines pushed through Florida, they opened new territory for settlement—and for embellishing the Florida image.

Following in these more exotic footsteps, society architect Addison Mizner brought what is now known as the Mediterranean Revival style into full flower. Early this century he brought to Florida the vocabulary of the Mediterranean, including the stuccoed walls and red barrel-tile roofs still synonymous with some areas of this state. Not content to design just buildings, Mizner planned the entire Worth Avenue area of Palm Beach, and began developing Boca Raton. Likewise, wealthy aviator Glenn Curtiss and architect Bernhardt



*In 1902, architect Frank Milburn modernized Florida's capitol building in Tallahassee, giving it a Beaux Arts flavor. Photo: Historic Tallahassee Preservation Board, Florida Department of State*

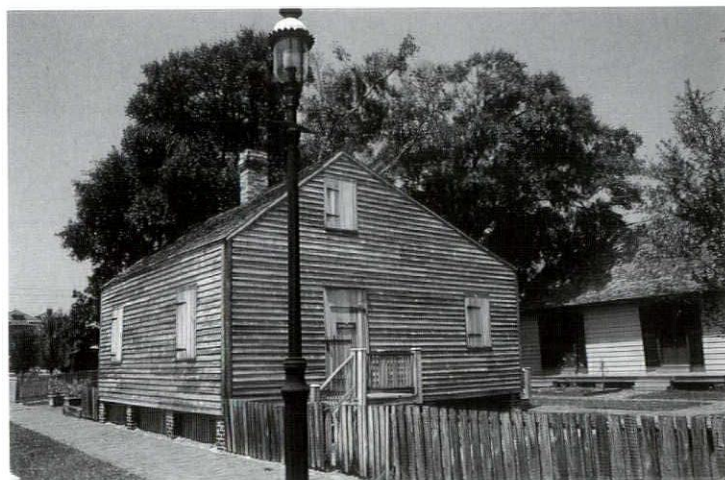
Mueller designed and developed the fanciful Moorish city of Opa-Locka. Many of these dreamers saw their visions crash with Florida's real estate bust beginning in 1926.

In the late 1800s, drawn by

growth and expansion, architects—some professionally trained, some self-proclaimed—began establishing practices here. The Florida Association of Architects was created in 1912, and four years later,

Florida's first professional state licensing exam for architects was given; four passed.

Architects and architecture were moving in divergent directions as the century turned. One movement, seeking more academically correct revivals of early architecture, had its roots in part in the "City Beautiful" movement. The World's Columbian Exposition, held in Chicago in 1893, expounded a vision of the grand American city, ironically modeled after Baroque Paris! "Make no little plans" extolled architect Daniel Burnham as he transformed part of Chicago's waterfront with columned white Neoclassical buildings and tree-lined boulevards. Thousands who visited the fair left impressed. Classical buildings enjoyed a resurgence, and for decades civic leaders emulated the boulevards and plazas in their town designs.



*Vernacular wood frame buildings on raised piers, such as the c. 1804 Julee Cottage in Pensacola, have been common throughout much of Florida's history. Photo: Division of Historical Resources, Florida Department of State*





*The Moorish Revival Opa-Locka City Hall, by architect Bernhardt Muller, was completed in 1926. Photo: Division of Historical Resources, Florida Department of State*

Simultaneously, at the turn of the century, the building industry was undergoing tremendous changes. Inventions such as the elevator and reinforced concrete made "skyscrapers" possible. Architect Louis Sullivan called for new honesty in design, where "form follows function," and Frank Lloyd Wright developed the organic, spare, and distinctively American "Prairie School." Jacksonville architect H.J. Klutho and others brought the new concepts to Florida, where they enjoyed a brief flowering. But by the end of World War I another new movement emerged.

With cars on the road, planes in the air, and electric toasters in the kitchen, America's love affair with technology was flourishing. This was reflected in sleek buildings that appeared better suited to speed across the ocean or take off in flight than to remain anchored to the soil. Strongly influenced by European designers, the sophisticated Moderne style, also called Art Deco, took hold—particularly in the fast-growing vacation paradise Miami Beach.

Florida experienced a flowering of architecture early this century—from Mediterranean and other Revival fantasies

reflecting the wealth and aspirations of new settlers, to new styles such as Prairie and Moderne, which developed a distinctive vocabulary for the twentieth century. After World War II, the advent of air conditioning and other technological changes lessened, for a while, the need to develop architecture specially suited to this state and its climate. Nevertheless, Florida's historic architecture has had a lasting impact. Historic landmarks remain as testimony, and lessons from the past continue to be seen in new development across the state. ■

*Vivian Young is Community Assistance Consultant for the Historic Tallahassee Preservation Board. For the Sesquicentennial, she is assisting the Florida Foundation for Architecture in developing a traveling exhibit, slide presentation, and booklet highlighting Florida's historic architecture. To arrange bringing this Sesquicentennial program to your community, contact Joanna Booth at (904) 222-7590.*



# Restoring Harmony

Sarasota Opera House  
Sarasota, Florida  
Stuart H. Barger, AIA

The opening of the doors of the Edwards Theater, on April 10, 1926, "admitted Sarasota into a fairyland of costly decoration, rich furnishing and never-to-be-forgotten artistry," said the *Sarasota Herald*. Jacksonville architect Roy A. Benjamin ("a master designer of amusement enterprises") was credited with designing the three-story steel frame and masonry complex.

Owner A.B. Edwards, Sarasota's first mayor, conceived the building as a year-round moneymaker in the winter resort town. Besides the theater auditorium, the original structure contained eight "exclusive shops" off the arcaded entrance, five business offices on the second floor, and a dozen furnished apartments on the third floor arranged around a three-story skylit atrium.

Traveling companies brought music, vaudeville, and plays to the theater. But from the 1950s (when it was renamed the Florida Theater) until it closed in 1973, movies were the main fare. Over the years, cosmetic changes reflected changing times and uses. With the Sarasota Opera's purchase of the building in 1979 began a continuing campaign to raise funds to refurbish the interior, and in January 1981, the company's 25th season opening was celebrated in its "new" facility. Two years later the Sarasota Opera House was placed on the National Register of Historic Places.

In 1987 the Opera commissioned the Sarasota firm of Barger + Dean Architects, Inc. to add an Educational Wing. As work progressed, the need for a total restoration and rehabilitation of the original building became evident. Funds were

raised locally, and the following year the Florida Department of State, Division of Historical Resources, and the National Endowment for the Arts provided grants totalling close to \$600,000 to restore the exterior and to renovate and rehabilitate the auditorium.

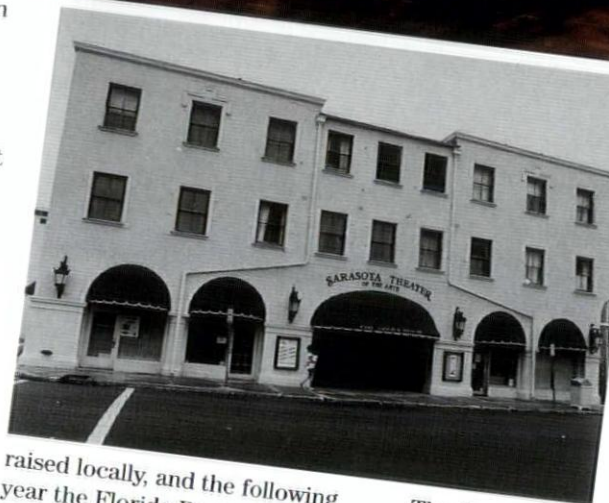
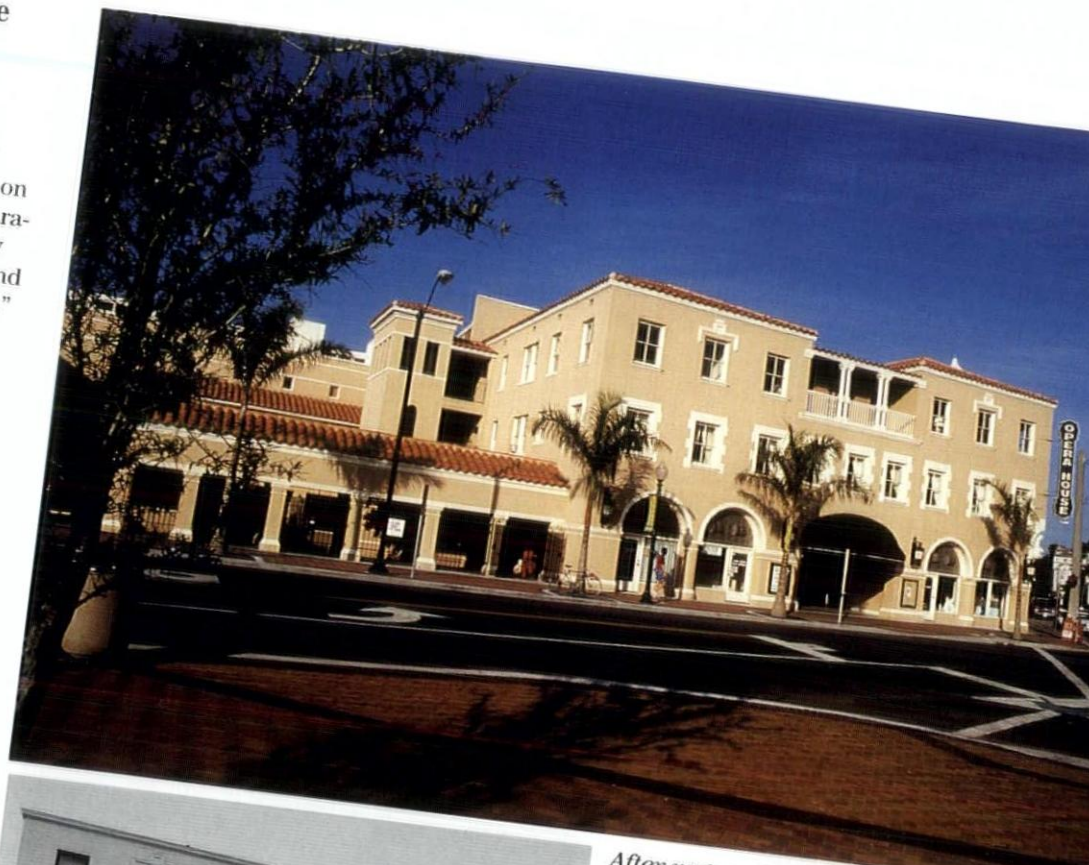
Barger + Dean helped design a master development plan, to be completed in stages as funds were raised, and restoration was begun. Original photographs and drawings were used in restoring the original appearance and character.

The three-story entrance façade exemplified the Mediterranean Revival style, popular in southern Florida because its heavy masonry walls, barrel-and-pan tile roof, and set-back punched windows provided some pre-air-conditioned cooling. Cream-colored stucco was embellished with ornamental plasterwork imitating stone. The second story was divided into nine bays marked by two-over-two, double-hung sash windows. Each second floor window was characterized by projecting window sills and

quoined surrounds. An open loggia occupied the center three bays of the third floor.

Additions that were removed during the Barger + Dean restoration included a tesseræ entrance surround (1950s) and a stuccoed wall containing three windows that enclosed the third-floor loggia.

The ground floor was divided into five bays marked by arched openings carried on piers and engaged cast stone columns. The openings originally contained fixed-glass shop window with leaded glass transoms



After restoration (above), the loggia has been reinstalled, and ornamental plaster "stone" work emphasizes detailing of second floor windows. The "Opera House" sign is in keeping with the original "Edwards" sign, and a sculpted figure that was destroyed by an earlier tenant has been reproduced by a local artist and placed in its original corner niche. At left is the 1987 Educational Wing addition.

Before restoration (left), showing enclosure of third-floor loggia, monochrome treatment of windows, and empty sculpture niche below sign area (removed). Photos: Barger + Dean





above. The entrance was located in the central bay within a segmental arch protected by a canvas awning.

Inside the rather simply decorated auditorium, the successful color schemes of the exterior guided the interior wall and accent colors. Missing plasterwork, stained glass light fixtures, and other details were recreated from originals and photographs. In meeting the Opera's expanded seating needs, platforms, risers, and loge sections were reraked to comply with code requirements and to provide better sight lines. A new lighting bridge was designed within the existing ceiling.

The main entrance lobby has been restored and the original atrium reopened to the third floor, although the original stained glass skylight was recreated at the second-floor level. Street-level spaces have been renovated and expanded, an elevator installed, and restrooms enlarged. Newly renovated offices and meeting rooms are housed on the second and third floors.

Firm principal Stuart Barger also designed the Asolo Center for the Performing Arts, which includes the 1921 Dumferline Theater restoration, and the state-of-the-art Booker High School theater, both in Sarasota. ■

**Owner:** Sarasota Opera Association

**Owner's Design Consultant:** Frank Folsom Smith, AIA

**Architect:** Stuart H. Barger, AIA, Barger + Dean Architects, Inc.

**Acoustician:** Bertram Kinzey, AIA

**Structural Engineer:** Stephenson, Stirling & Associates  
**Mechanical/Electrical Engineers:** Raytech Engineering, Thomas and Jones, Handy & Associates

**Civil Engineer:** Smally Wellford & Nalven

**Construction Management:** Square One Contracting, Inc., The Moss Group



*Low-key Mediterranean Revival style characterizes the auditorium (above). The cool contrasting exterior color scheme was applied inside as well. Acoustics are excellent, thanks in part to the original upward-tilting balcony design.*

*Entrance lobby atrium (left). Original railing, hand-turned columns, and stained glass skylight can be seen at second-floor level. Entrance doors replicate originals. Here, as in a number of cases throughout the building where money-saving measures precluded extensive restoration of details, the roughness of worn capitals adds charm and a bit of "soul." The chandelier is from "Tara," the movie set for Gone With The Wind. Photos: Barger + Dean*

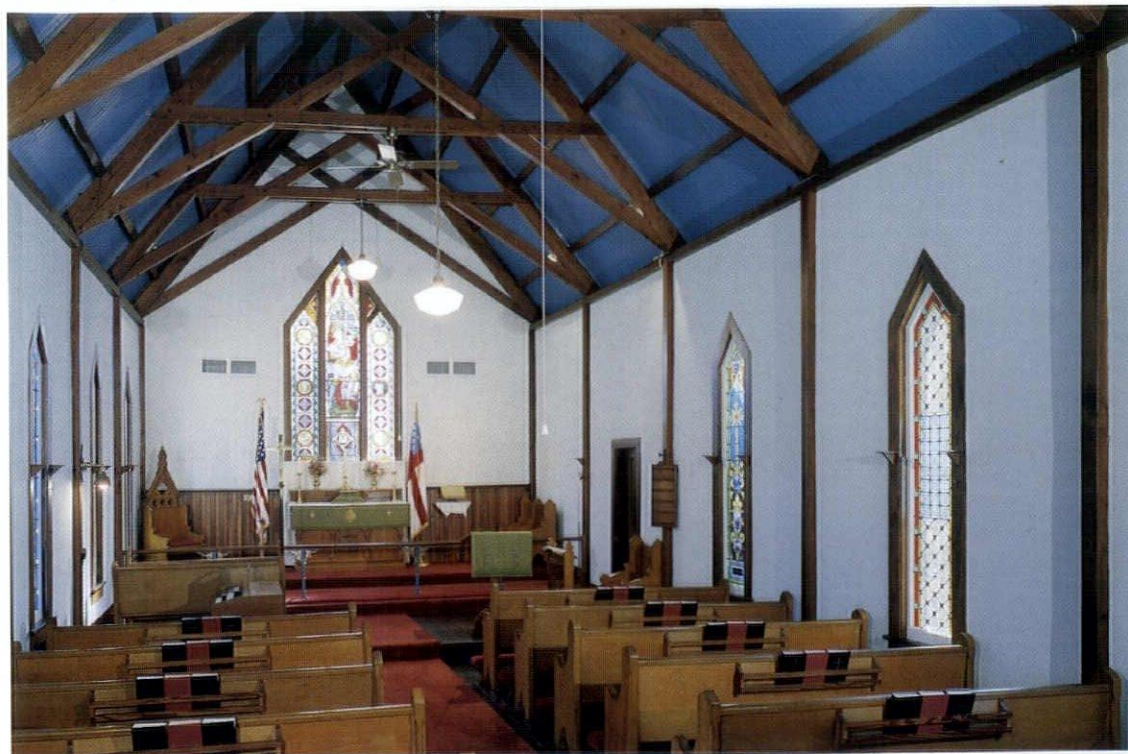


## An Eye to the Past

**Kenneth Smith Architects**  
**Kenneth R. Smith, AIA**

**R**estoration projects make up about half of Ken Smith's work. Before founding his own Jacksonville firm in 1984, he was associated with two other firms. As a vice president of Shepard Associates, Smith served as project manager for the restoration of the Florida State Capitol building to its 1902 appearance.

A list of Smith's historic restoration (and award-winning) projects includes numerous residences; churches, including St. John's Cathedral (Gothic Revival, Jacksonville), and the relocation of the 1888 Carpenter Gothic St. Paul's Episcopal Church to the Jacksonville Children's Museum; a series of additions and renovations for St. Augustine's singular Lightner Museum; the St. Augustine Lighthouse; and various other large projects such as the twelve-story Greenleaf Building in Jacksonville. The oldest is the Sequi Kirby house,



*St. George's Episcopal Church (1882), Ft. George Island, Florida. This Carpenter Gothic style mission church (above) was one of several built along the St. Johns River. Deteriorated exterior wood was replaced, and stripping exposed the original dark green window trim color. Wood siding was added at the base of the newly straightened bell tower. Interior work (left) included replacing damaged flooring and beaded board wainscot, restoring plaster finishes, and painting to match original colors. Photos: Judy Davis—Photographer*





St. Augustine Lighthouse (1874), for Junior Service League of St. Augustine. Oil storage building windows (which had been filled with concrete block) and shutters were detailed based on original building drawings. A new historically accurate cast iron main gallery cornice sill surround was cast and installed. All masonry and metal surfaces were repaired and repainted to the period. Photo: Denis Duckett, Sky-Shots

St. Augustine, which has served as a library for the past hundred years and dates to before 1763. He has served as historic restoration consultant to other firms for the renovations of Floyd Hall at the University of Florida, Gainesville, and on additional projects.

Smith approaches each project with the goal of preserving the architectural integrity of the historic building. Researching and restoring original structural configurations, materials, and colors requires detective work and casting a wide net for suppliers and capable artisans. However, the greatest creativity often is devoted to bringing an old building up to code and accommodating the modern electrical, mechanical, plumbing, circulation, and communication needs of the client. All work meets the Secretary of the Interior's Standards for Historic Preservation Projects.

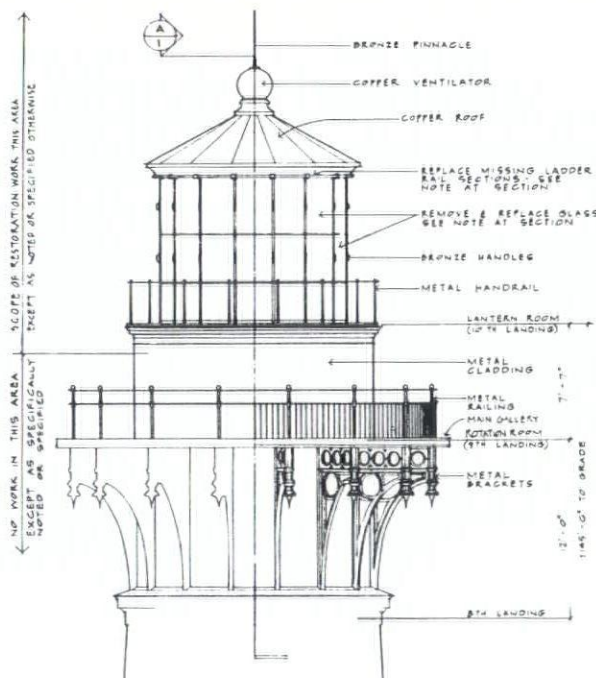
Even when a restoration budget is small, the results can be striking. Take the case of St. George's Episcopal Church. One of a dozen Carpenter Gothic style river missions built by the Episcopal Church along the

St. Johns River in the late 1870s and early 1880s, the present congregation numbers about twenty families. The restoration budget was limited to \$35,000. The focus of the project was to repair structural damage caused by age and termites to floor beams and joists, and to replace deteriorated wood siding, battens, trim, and skirt boards, and interior woodwork, plasterwork, and flooring. The bell tower needed straightening, and stained glass windows and plaster wall finishes were restored. Fresh interior and exterior paint gave the final touch.

It is not uncommon for restoration projects to be done in stages. Too, in an office situation where daily work must proceed on the construction site, mutual accommodation and patience are crucial, says Smith. During phases I and II of the restoration of the Jefferson County Courthouse, Monticello, completed in 1994, county offices did business as usual and a major trial took place.

To update air conditioning and electrical systems without

*Please turn to page 18*





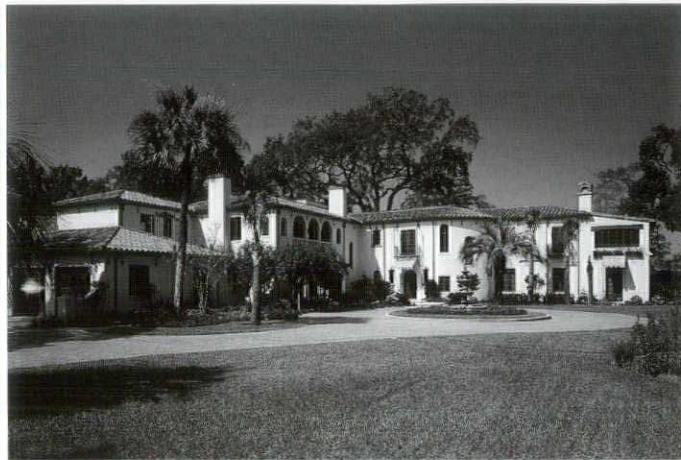
# Kenneth Smith

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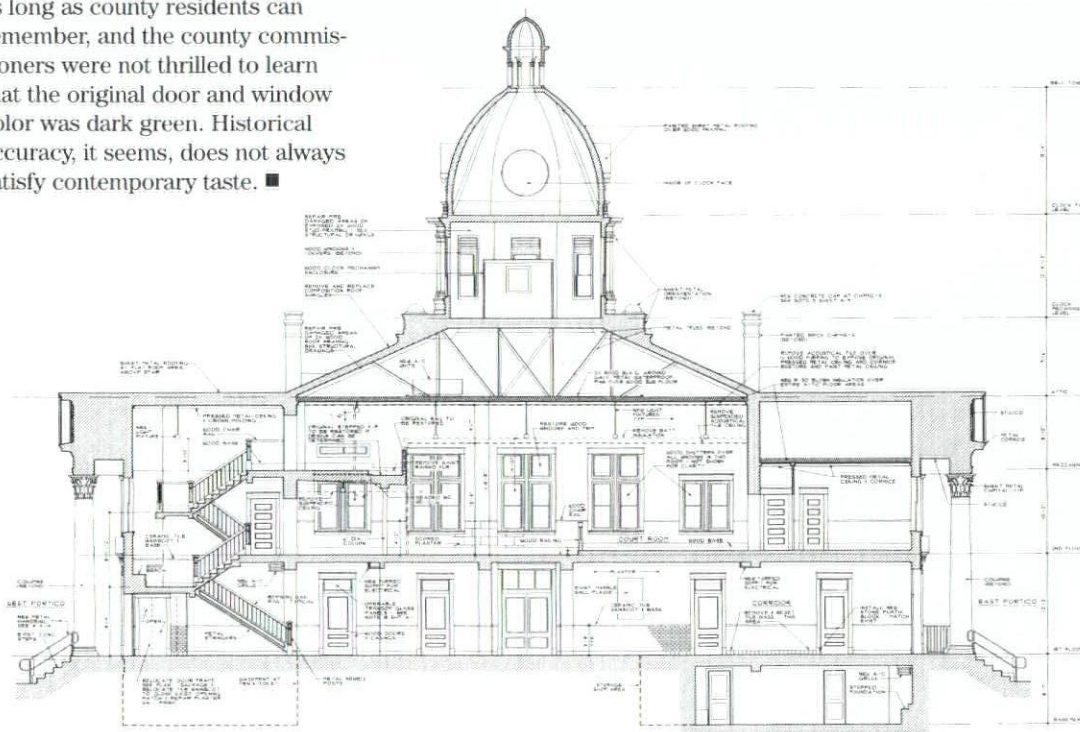
forfeiting the original high ceilings of the first floor offices at the courthouse, Smith employed a technique he also used in the 1928 portion of the Swisher Mansion/Dahl Residence. He minimized air conditioning ductwork by introducing several units cooling small zones instead of a single large unit. This plan will allow the restoration, in the current phase III, of the original second-floor courtroom balcony (which was boarded up to house air conditioning equipment and ductwork in the 1960s), and the pressed metal ceiling.

The restoration of the 1874 St. Augustine Lighthouse won Smith awards from the Jacksonville Chapter of AIA and the Florida Trust for Historic Preservation. Done in phases to reverse major deterioration, the project included restoring windows, shutters, handrails and other features to the extent possible, or replacing missing details with historically accurate reproductions.

It is not uncommon for the search for historical accuracy to generate surprises, particularly where original paint colors are concerned. The Jefferson County Courthouse is no exception. The building has been painted white for as long as county residents can remember, and the county commissioners were not thrilled to learn that the original door and window color was dark green. Historical accuracy, it seems, does not always satisfy contemporary taste. ■



*Swisher Mansion (1928) (Mr. and Mrs. James Dahl Residence), Jacksonville, Florida. The complete renovation included two additions, a south wing (top, shown left of middle chimney) replacing an earlier, nonhistoric addition, and an open, colonnaded "river room" (bottom). Original ornamental metalwork was restored, and deteriorated windows were replaced with new matching windows fabricated by original manufacturer. New clay tile roofing by original manufacturer was added to match original roof. All interior and exterior surfaces were refinished, with detailing to match historic finishes. Photos: Judy Davis—Photographer*



*Jefferson County Courthouse (1908), Monticello, Florida. Much of the first-floor work and the tower were completed in phases I and II. Exterior finishes, a new elevator, and the restoration of the second-floor courtroom are among the main focuses of phase III. Research is underway to determine the floor and rail design of the original balcony in the second-floor courtroom. Removal of acoustical tile added during the 1960s revealed pressed metal ceiling and cornice, which will remain exposed. Drawing: David Luke, George Gillespie*



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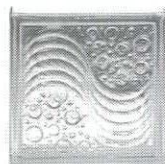
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## Antique Retreat

**Pan's Garden  
Palm Beach, Florida  
Leslie Divoll, AIA**

**T**he Preservation Foundation of Palm Beach is often asked, "What does a new park have to do with historic preservation?"

The answer, "A lot!" gives a clue to the expanded role that preservation organizations have come to play in communities nationwide.

With Pan's Garden, the foundation has buffered a historic area, stabilized the edge of an established neighborhood, restored a section of the town's street grid to its former pattern, reintroduced one hundred species of native plants representing the botanic heritage of the area, recycled historic building materials, rescued doomed architectural fragments, introduced antique art for public enjoyment, supported traditional master crafts, and stimulated the vitality of an architectural style.



*Native plants grace shaded walk toward the center pavilion (left), designed as an open-air classroom. Cuban barrel roof tiles were found on the site. Photo: Stephen B. Leek, Photographer*

Pan's Garden opened in November 1994. The foundation acquired the 25,000-square-foot site, located two blocks from historic Town Hall and one block off Worth Avenue, and commissioned Palm Beach architect Leslie Divoll to create

a public green space that would bridge residential and commercial zoning districts. At foundation expense, the street and sidewalk were realigned to their narrower historic layout, reinforcing the established neighboring residential character.

Intended to recreate the basic palette of native Florida landscape materials available to the town's early settlers, Pan's Garden will serve as an education center. Foundation programs will demonstrate how Palm Beach can meet modern

## The Mizner Industries

*By John P. Johnson*

**A**ddison Mizner, the legendary Palm Beach architect, created an integrated system for the manufacture of furniture and architectural elements that were used in the houses he designed for wealthy clients. First prompted by a desire to control the color and texture of clay roof tiles, Mizner acquired a pottery business and three kilns from his friend Paris Singer, the sewing machine heir. In 1919 he established the Las Manos Potteries, the first division of Mizner Industries.

Located adjacent to the Florida East Coast Railroad tracks in West Palm Beach, the Industries expanded to include seven kilns for the manufacture of roof tiles, floor tiles, and glazed pottery; a furniture factory to produce both "antique" reproductions and the architect's own designs; a workshop to produce a woodlike composite material "woodite"; a blacksmith

shop to make wrought iron and hardware; a cast stone plant to fabricate ornamentation for window and door surmounts, columns, capitals, and balustrades; a workshop to assemble bronze window and door frames; as well as drafting rooms and storage sheds. In 1929 Mizner added a workshop to cut large blocks of coquina rock that were quarried in the Florida Keys and transported by rail to the site.

The artists, artisans, and architects employed by the Industries produced fixtures, furnishings, and a variety of elements for the popular style of architecture known as Mediterranean Revival. In the 1920s most architects and builders throughout south Florida looked to Mizner Industries for the items needed to construct and decorate residences, hotels, and public buildings.

Many of the original buildings of Addison Mizner and his contemporaries are

preserved and cherished by their owners. Too, close inspection of furnishings in many houses and public buildings has revealed the rich diversity of products still in use and coveted as antiques. The legacy of Mizner Industries continues to influence modern architectural design and furnishings in Florida.

*John P. Johnson, Director of the Historic Palm Beach County Preservation Board, recently completed an "industrial archaeology" project, looking into the tools, machinery, and practices of a Mizner Industries successor company.*





*Irreplaceable antique Portuguese and Mizner Industries tiles cover the landscape wall used to create a dramatic wall fountain and focal point of the garden. Pan's Garden has been awarded the Florida Trust for Historic Preservation's 1995 award for Outstanding Achievement in Landscape Design. Photo: Stephen B. Leek, Photographer*

environmental challenges with less reliance on skilled gardeners and limited irrigation water.

Preserving architectural heritage sometimes means performing rescue operations for both magnificent fragments and humble—but irreplaceable—architectural materials. The foundation rescued seven sections of tiled landscape wall destined for demolition at the landmarked Casa Apava estate. Built in 1918 for the Bolton family, Casa Apava's extensive landscape walls were part of the design created by Abram Garfield, architect son of President James Garfield. The entrance axis terminates at the dramatic wall fountain created by this salvaged

architectural artifact. Irreplaceable antique Portuguese and Mizner Industries wall tiles also were worked into new landscape features and interior finishes. "Recycled" paving brick and

old Cuban barrel roof tile salvaged from derelict structures on the site were matched with carefully selected new materials and used in new construction. In architecturally conserva-



*Detail of landscape wall. Photo: Stephen B. Leek, Photographer*

tive Palm Beach, Mediterranean Revival remains the preferred style, even for new structures. The design intent was to respect the tradition while creating a fresh expression of the style.

Divoll and landscape architect Sanchez and Maddux collaborated closely to integrate every aspect of the park design. The formal layout is organized around a central entrance axis that both links and divides the garden into discrete "upland" and "wetland" segments. Enclosed interior space is reduced to a practical minimum. Three open-air pavilions are joined through vine-covered cast stone and cypress pergolas that flow easily onto mulched paths continuing through upland and wetland zones. The central pavilion was designed to accommodate a class of schoolchildren. The adjacent patio may be tented to shelter social events.

Though they are clearly current in concept and execution, the large bronze and copper entrance gates were produced by Reich Metal Fabricators, one of the surviving Mizner Industries. Just inside the gates is a bronze casting of Pan, ancient Greek god of woods and fields, from which the garden takes its name. Sculpted by Frederick MacMonnies in 1890, another casting of this popular work stands in the Courtyard of American Sculpture at the Metropolitan Museum of Art in New York City. ■

**Architect:** Leslie Divoll, AIA, Leslie Divoll, Inc.  
**Landscape Architect:** Sanchez & Maddux, Inc.  
**General Contractor:** Worth Builders, Inc.  
**Owner:** Preservation Foundation of Palm Beach



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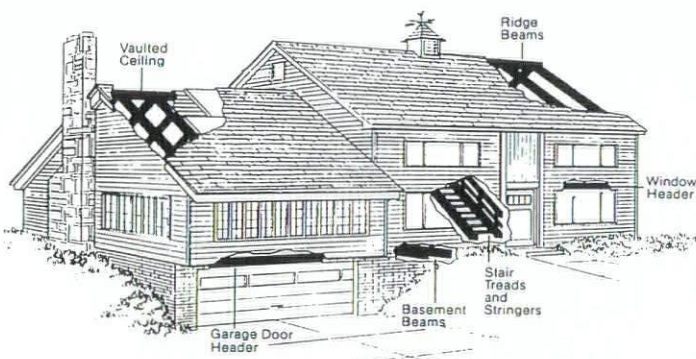
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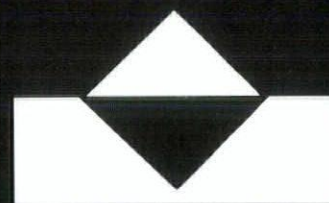
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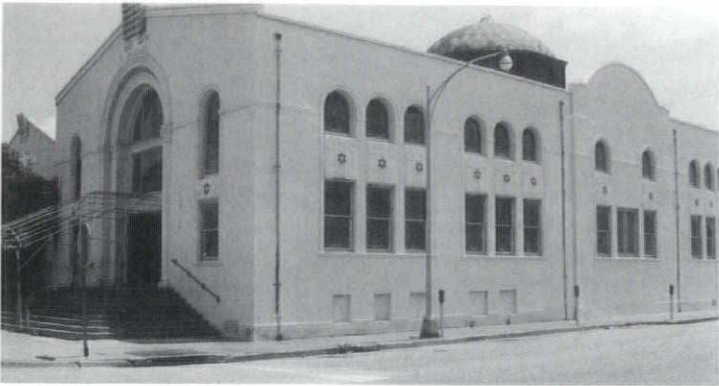
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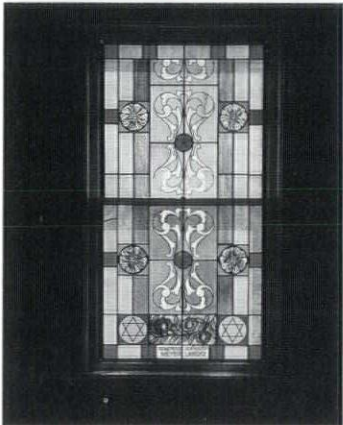


**Sanford L. Ziff Jewish Museum of Florida  
Miami Beach, Florida  
Ira D. Giller, AIA**

One of the most recently restored Art Deco buildings on Miami Beach has been dedicated as the Sanford L. Ziff Jewish Museum of Florida. Ongoing exhibitions will celebrate 230 years of the Jewish presence in the state, beginning in Pensacola in 1763. The former temple that housed the Congregation Beth Jacob, Miami Beach's first Jewish congregation, was built in 1936 by architect Henry Hohouser.

The only building outside the Art Deco District with a historic designation features 77 stained glass windows, an elegant façade, and a Moorish copper dome. Miami businessman Ziff rescued the old temple from demolition and provided seed money for the restoration. Miami architect Ira D. Giller took charge of the extensive restoration. Inside, wooden flooring, concrete foundations, plaster-work, and original Art Deco lighting fixtures were restored and the balcony turned into executive offices. On the outside, the dome was restored and all exterior surfaces repaired and repainted.

Restoring and safeguarding the stained glass windows, which form the centerpiece of the museum's collection, was aided by a grant from the Florida Department of Historic Preser-



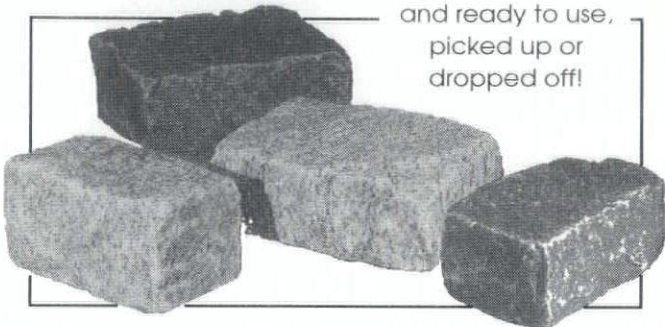
*A vintage 1940s postcard provided a guide to colors for the newly repainted Art Deco window panels. (above)  
The "Meyer Lansky" window, was donated by the Prohibition-era gangster who was a member of the congregation.  
Photo: Alex Gort*

vation. The delicate windows have been protected using Dupont "SentryGlas" composite. Seen through its glasslike transparency, the bright colors are beautifully visible inside and well protected outside. The clear composite is resistant to the impact of hurricane force winds, vandalism, or abrasion, and was the first glass product to meet Dade and Broward counties' tough new building codes. ■

**Architect:** Ira D. Giller, AIA, Giller & Giller  
**General Contractor:** Giller & Giller  
**Owner:** Sanford L. Ziff Jewish Museum of Florida

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## Collegiate Gothic

**Dodd Hall Addition and  
Renovation  
Florida State University  
Tallahassee, Florida  
William R. Elliott, Jr., AIA**

One of the most difficult tasks an architect can undertake is creating an addition to a historic building. This becomes doubly difficult if the original building is an outstanding example of a recognizable style or period. In this case, the architect was charged with creating a new auditorium building adjacent to Dodd Hall, one of the most historically significant buildings on the Florida State University campus. Dodd Hall is located on the east end of the campus in the midst of a group of Collegiate Gothic structures dating from the late-19th century. Elliott and Marshall's design for the new auditorium is respectful of the hallmarks of that style. It also introduces a contemporary element in that it does not attempt to disguise its "newness."

The remodeling and renovation of Dodd Hall required the conversion of 40,000 square feet of space into new academic and counseling offices, conference rooms, and small reference library areas. Stringent programmatic requirements along with fixed exterior shell conditions led to a "floating floor" concept in select areas of the building. The addition of several structurally independent floors resulted in a multilevel system. Careful planning ensured handicap accessibility and compatibility with interior circulation patterns.

State-of-the-art lighting and HVAC were painstakingly integrated into the historic structure. Other imperatives of the restoration project included the installation of new elevators

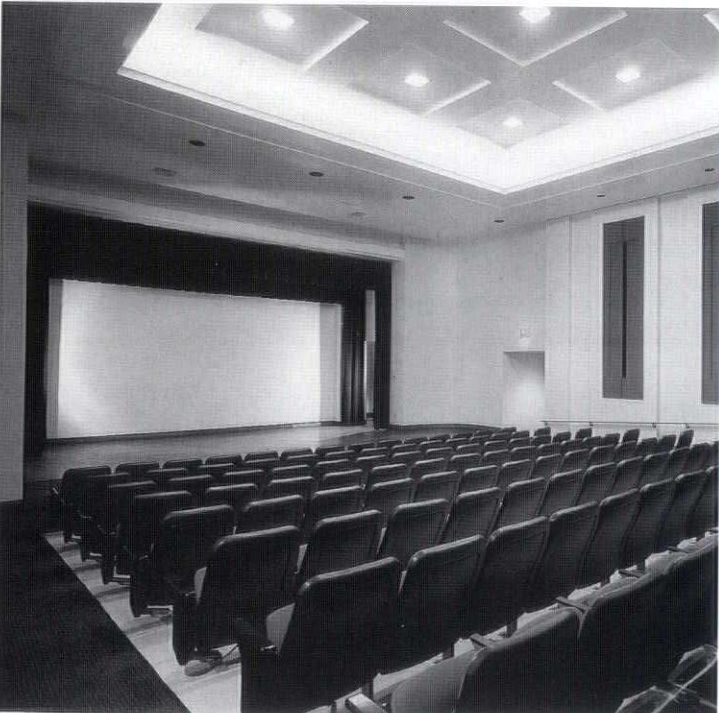


*Renovated lobby and stair of Dodd Hall. Photo: Sue Root Barker*





*Dodd Hall, south and east elevations showing low-walled entry portico.  
Photo: Sue Root Barker*



*The 120-seat auditorium addition to Dodd Hall. Photo: Sue Root Barker*

and open office systems, creating below-ground tunnels, making fire code corrections, waterproofing the basement, and reroofing the steeply pitched clay tile roof.

In concert with the restoration, Elliott and Marshall designed a new 120-seat auditorium building of approximately 5,000 square feet. A narrow, steeply sloping site and complex existing pedestrian circulation patterns dictated careful placement of the new building. Low planter walls and landscaping were used to make the transition from the high vertical

walls of the auditorium down to the level of the sidewalk.

Requirements for a climate-controlled basement beneath the auditorium, an underground tunnel, and connecting elevator were satisfied despite problems related to a high water table, unstable soils, and the steeply sloping site. The tunnel was needed to connect the Pepper Library, where personal artifacts belonging to the late Senator Claude Pepper are on display, and the archives housed below the new auditorium. This underground space was also designed for multimedia presentations and use as a lecture hall.

The project was recognized by AIA Tallahassee with a 1994 Honor Award for Excellence in Architecture and by the Tallahassee/Leon County Historic Preservation Board with a 1994 Award for Outstanding Achievement in New Construction Compatible with a Historic Structure. **DG**

**Architect:** Elliott and Marshall, P.A. Tallahassee, Florida

**Principal-in-Charge:** William Robert Elliott, Jr., AIA

**Project Architect:** Brad Innes, R.A.

**Specifications:** William Douglas, R.A.

**Production and Project Representative:** David Vincent, R.A.

**Consulting Engineers:** Kun-Young Chiu and Associates, *Structural*; Liebttag Robinson & Wingfield, *Mechanical*; Ardaman and Associates, *Geo-Technical*; Broward Davis and Associates, *Civil*

**Landscape Architect:** Smith-Gilchrist, P.A.

**Interior Design:** Elliott and Marshall, P.A.

**Contractor:** Harbert General Contractors

**Owner:** The State University System of Florida and Florida State University



# VIEWPOINT

## The National Register Criteria

By Herschel Shepard, FAIA

Design professionals are dealing with increasing numbers of buildings and districts listed on the National Register of Historic Places, and most are familiar with the Secretary of the Interior's *Standards and Guidelines for Rehabilitation*. However, many are not familiar with the criteria for evaluating properties for listing on the Register. Several criteria determine the significance of properties protected by the *Standards and Guidelines*, and certain aspects of the criteria that are of particular interest to design professionals are briefly addressed in this essay.

The Register includes properties that are deemed significant at the national, state, and community levels. The following criteria are listed in the public information brochure distributed by the U.S. Department of the Interior, National Park Service.

*The quality of significance in American history, architecture, archeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:*

- a. *that are associated with events that have made a significant contribution to the broad patterns of our history; or*
- b. *that are associated with the lives of persons significant in our past; or*
- c. *that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master; or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*

*d. that have yielded, or may be likely to yield, information important in prehistory or history.*

Buried in the first phrases is a key word, "integrity." Often overlooked and misunderstood, its meaning may be made clearer if "essentially unchanged" is substituted for "integrity of." Note, however, that later modifications to original conditions

***...the history of technology of a community is encapsulated in its structures, just as history and prehistory are encapsulated in its archeological sites.***

may themselves be considered historically significant and, therefore, part of a site's "integrity." The meaning of integrity for a specific site is defined by the scope and emphasis of the National Register nomination for that site. It is wise to review the nomination with Florida Bureau of Historic Preservation personnel before accomplishing any work.

Design professionals should be aware of the architectural consequences of phrases a. through d. above. The first two deal with significance through association, the last two with significance that is "embodied" in, or capable of being "yielded" by, the property itself.

Buildings and historic districts associated with events or persons as stated in phrases a. and b. may have little or no inherent architectural merit. They are in fact viewed as artifacts, the value of which is usually derived solely from a relationship with persons or events to whom we assign significance. Typical examples include Civil War battlefields and homes of the famous (and infamous). Design professionals

often find it difficult to justify rehabilitating these structures or districts, and there is a strong temptation to "improve" them. Although structural and code-related modifications often are unavoidable, changes based upon subjective preferences prevent us from experiencing these sites as our predecessors experienced them, and a fundamental reason for preserving them is subverted if these

national landmark historic districts are included within a national park that commemorates Dr. King. Here, apparently, all structures which existed during his life and all activities in the area are considered to be significant, but proposed plans that attempt to revitalize the area indicate that a strict interpretation of the legislation creating the park is not being followed.

Architects usually accept criterion c. without difficulty, because significance is defined as resulting from an embodied characteristic or representation found in the work itself. Rehabilitation and adaptive use of buildings and districts in this category enhance the architectural features from which significance is derived, and the problems encountered under criteria a. and b. are avoided.

Finally, criterion d., often thought to be applicable only to archeological sites, is equally applicable to all construction and is determined by another characteristic: information. Note particularly that the history of technology of a community is encapsulated in its structures, just as history and prehistory are encapsulated in its archeological sites. The workmanship and materials of previous eras present in older structures cannot be duplicated because we cannot duplicate the imprint left by the passage of time. For this reason reconstruction, no matter how accurate, can never recapture this aspect of the "integrity" of the original.

*Herschel E. Shepard, FAIA, is a Distinguished Lecturer in the Department of Architecture, University of Florida, Gainesville. He regularly consults on and directs a variety of historic preservation projects in the state and around the nation.*



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# VIEWPOINT

## Lessons from Yesterday Give Insights for Today

By C. Trent Manausa, AIA

Too often in our culture, a quick-fix, throwaway mentality has influenced important building decisions. That pervasive mindset not only has created "temporary" buildings but has led to the demise of many very restorable and usable older buildings. How many of today's structures, built to meet a budget not a function, will stand the test of time? If we hope to create lasting architecture, we should take some lessons from buildings of the past. In the process of preserving these enduring structures, we can gain considerable knowledge for the creation of new architecture.

While building practices and materials continually change, the fundamental elements and purposes of buildings remain the same. Buildings provide shelter from the elements. They provide organized spaces for education, recreation, business, entertainment, social interaction, religion, and government. A building's architecture often expresses the social, political and religious values of the times.

A major aspect of our firm's practice is forensic architecture, the diagnosis and solving of building problems. Although we sometimes deal with brand new buildings, working toward the historic preservation and restoration of notable old buildings provides us special satisfaction.

Besides taking great pleasure in exploring old buildings, seeing the craftsmanship and details of our past, it is always rewarding, personally, to figure out what an architect was trying to accomplish and how it got done. It is as true today as in the past that many skilled craftsmen are needed to complete a truly functional, well-built building. It is a sad commentary, but we often sense that craftsmanship and pride in the work are rapidly diminishing. Shortcuts and expediency take precedence, often leaving the long-term owner subject to

considerable maintenance and replacement.

Investigating the true historical background of a building or building component is fascinating and often full of surprises. One of our projects involved replacing a deteriorating and leaking tile roof on the historic post office in Fernandina Beach, Florida. Our initial inspection revealed the red clay tile roof to be very fragile, with many tiles broken from foot traffic during attempted repairs. We also determined that this was not the original roofing tile, and that the deteriorated underlayment required replacement.

The only "clues" given to us were some old black and white photographs taken around the time the post office was constructed. In searching the old basement below the post office (with the Postmaster's permission) we made some interesting discoveries. We found the original blueprints—specifying a green tile roof. We also found several "original" roof tiles: green "Ludowici" tile, which fit the specifications and were probably maintenance tiles given the owner at completion of construction.

Based on this information our documents were completed, the project bid, and a contract awarded. The contractor had to order the tiles from France, and while awaiting delivery he removed the red tile and installed the new roofing underlayment. When the new green tiles arrived, he began stacking them on the roof for installation. About this time the Postmaster's phone began ringing. Numerous callers were complaining about changing the "historical" red tiles to green. Even the local historical society called demanding work be stopped.

A public meeting was held. It was duly noted that our firm had contacted the State Archives with our findings and proposed roof replacement, and the state

had given approval prior to bidding. The facts were presented regarding the original specifications and the actual old green tiles shown. Finally, everyone was satisfied, even pleased, that the historical integrity was intact. This is a prime example of how "memories" must be confirmed by other sources. The red tile had been on the post office so long, there was no one left who remembered the original green tile.

Renovation work in historical buildings can also generate creative methods of preservation that don't destroy or alter the original materials. Our work on the Prime Osborn III Convention Center, Jacksonville, is an example where research and legwork resulted in a new approach that will continue to affect architectural preservation. The convention center is a restored 1919 Neoclassical railway terminal, now used for conventions, meetings, trade shows and exhibitions. One of the major problems encountered was water intrusion through the limestone on the exterior walls. Our task was to stop this water intrusion while maintaining the original integrity of the limestone.

It turned out that the limestone panels had not been properly grouted. They leaked and were badly discolored. Investigation and consultation with the State Archives revealed that the National Park Service and preservationists did not allow water-repellant coatings on historic limestone structures. Thus, the exterior was not sealed following high-pressure washing during the 1984 renovations and expansion of the old terminal for its present use.

Preservative coatings have come a long way in the past ten years, and we were able to find a product system specifically designed for the porosity of limestone. We obtained permission from the National Park Service and the state to use the

product, and this became the first project in the country where waterproofing of historic limestone was approved. The project was closely monitored by the state and the National Park Service. Again, research and documentation of all the facts made a big difference. The limestone was properly cleaned, grouted, and sealed. It now looks like it did when first constructed, and the water-repellant sealer has stopped the deterioration of the interior plaster work.

Investigating details of the past has given us many enjoyable times and memorable moments. We have explored and renovated the old Armory in Appalachicola. We designed a unique system to operate the original teller windows in the historic post office in Appalachicola. My partner rappelled down the Historic Capitol dome to determine the cause of water intrusion around the ornamental metalwork. We provided research and details for restoring the Carnegie Library at Florida A & M University. Our redesign of the gutter system and a new copper standing seam roofing system saved the historic Centenary United Methodist Church in Quincy. All these and more add up to a very pleasurable and satisfying practice of architecture. They also add to our knowledge for design of new buildings for today's market.

While we cannot go forward by copying the past, we must learn by understanding, improving on, and correcting, not duplicating, architecture and details of the past. The insights we gain by the study of history can be used to create architecture compatible with current values using today's and tomorrow's technology.

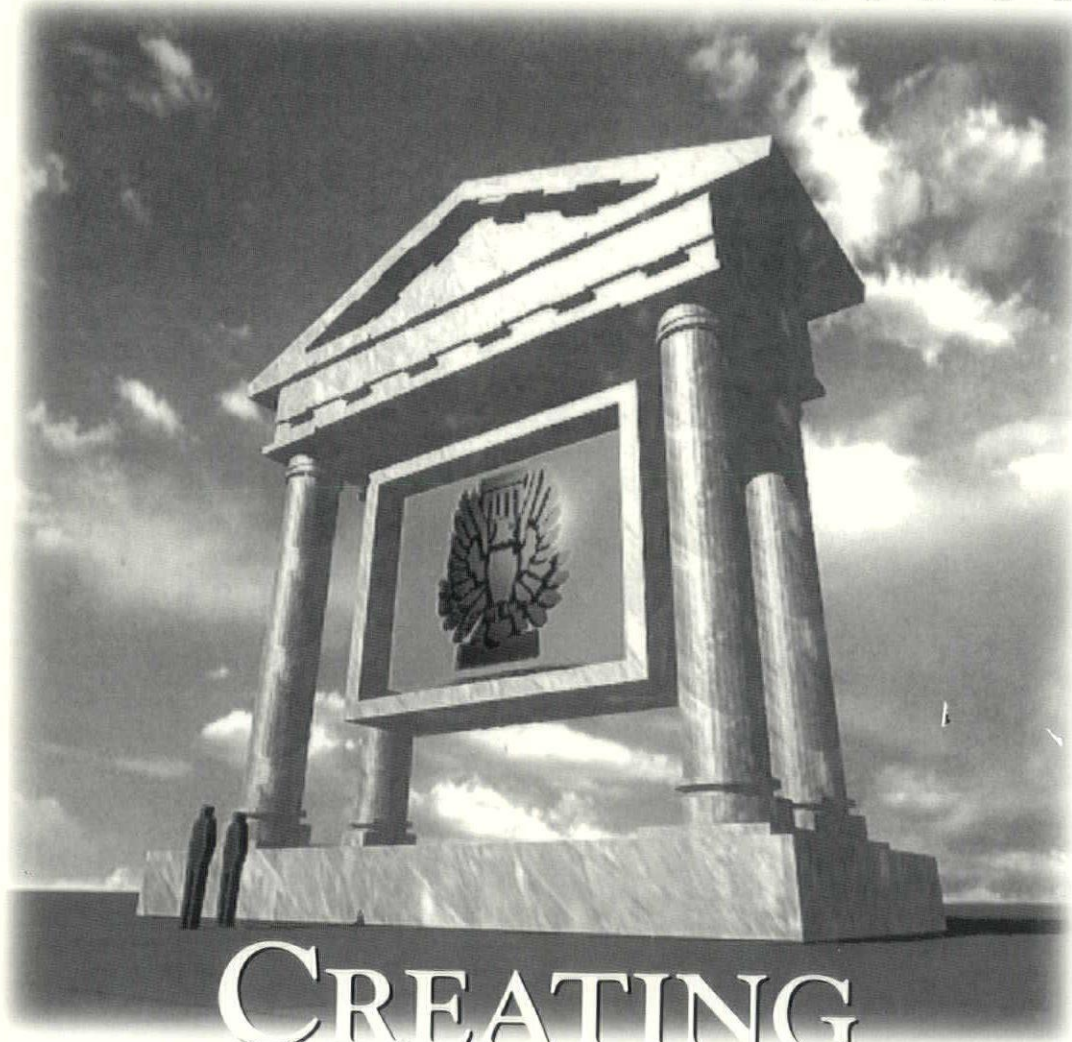
*C. Trent Manausa, AIA, of Manausa & Lewis Architects, Inc., Tallahassee, has completed more than a dozen historical restoration projects*





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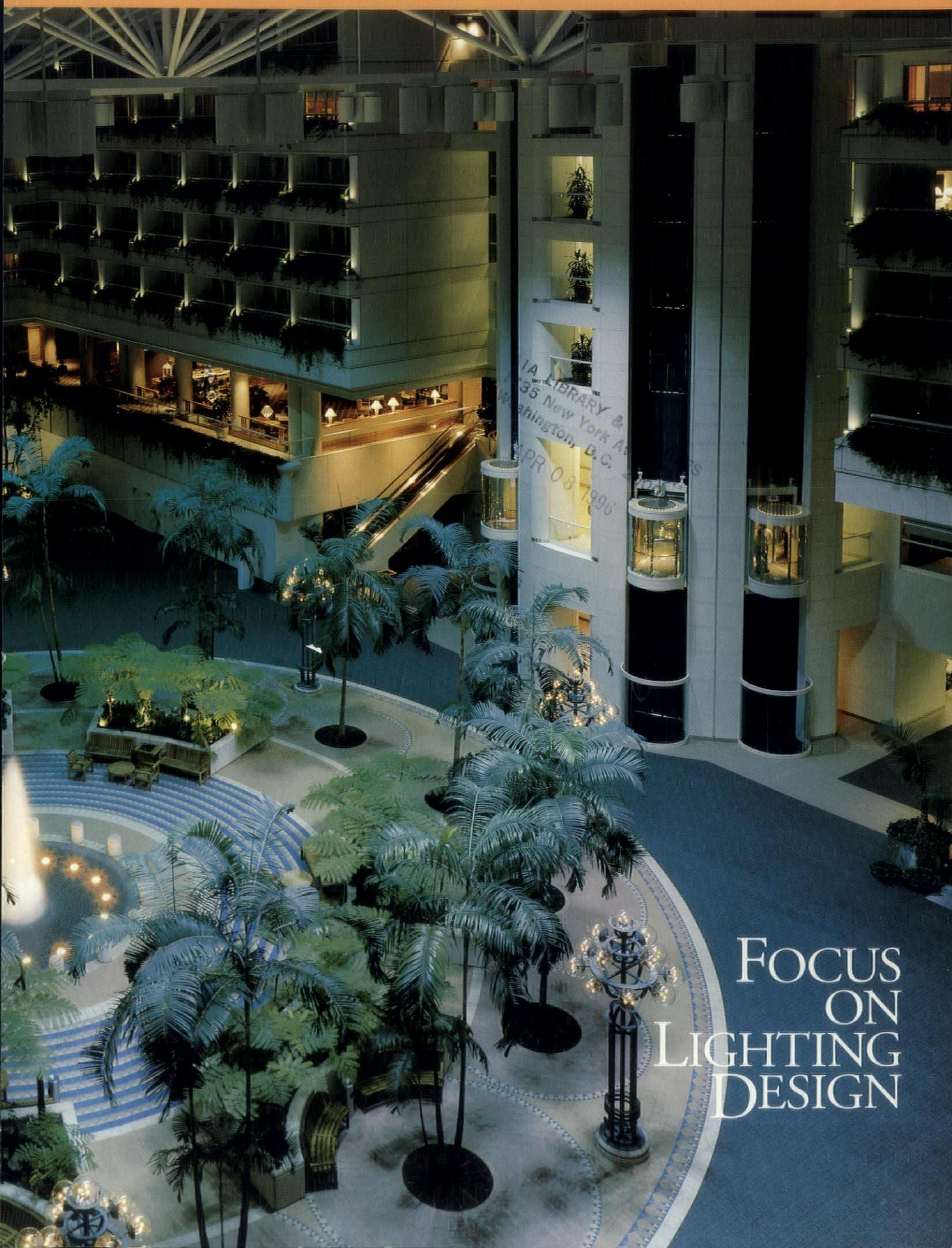
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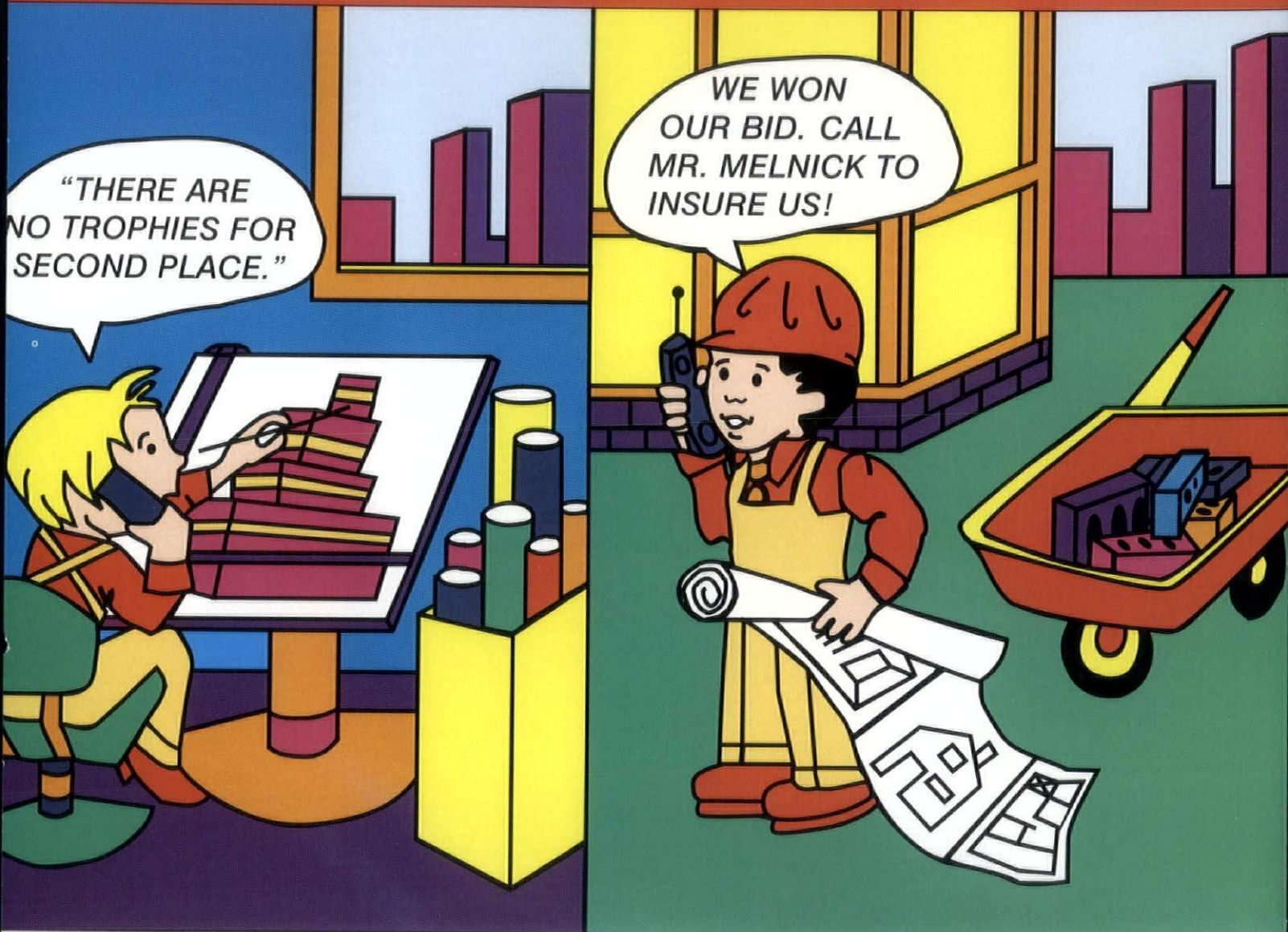
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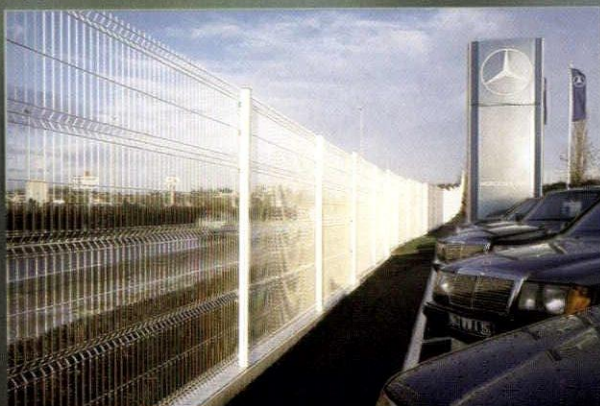
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Spring 1996  
Vol. 43, No. 1

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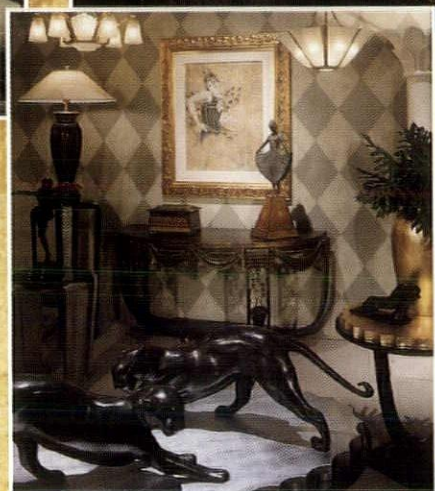
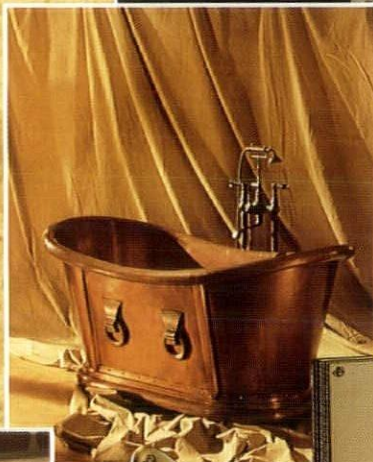
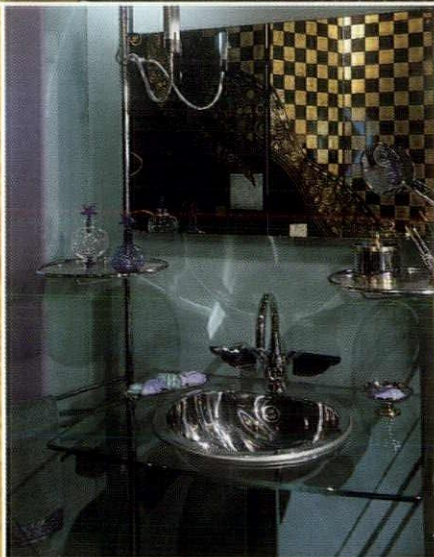
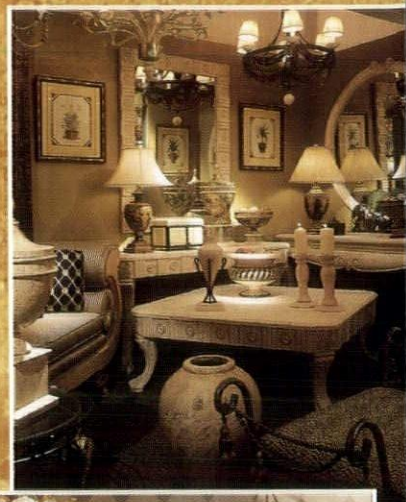
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When lighting designer Robert Laughlin sent us a portfolio to select a few visuals for his Viewpoint, we were in for a treat. Photo after photo illustrated how thrilling and inspiring are the effects of lighting in architecture. In the course of an hour, without leaving the table, it was possible to tour some highlights around the state, from the theatrical impressions of night-lit bridges such as Dame Point in Jacksonville or Brickell Avenue in Miami, to the stunning portico of the Florida Supreme Court in Tallahassee, to Orlando's elegant Church Street Station and playful "kingdom of rock," the Hard Rock Cafe, and around again. We would recommend such an object lesson to any young architect who has not yet grasped the immense power of lighting.

We are fortunate in this issue to have been able to touch on a number of aspects of lighting, the practical as well as the aesthetic. KBJ architectural lighting specialist David Laffitte's glimpse into lighting considerations for the prizewinning Orlando International Airport will interest architects and travelers, alike. In each of our featured projects, as in many buildings in Florida, where sun is a great natural resource, daylighting has been put into play, consciously or not, whether for its energy saving possibilities or its reflective qualities. Lamp and lighting control technologies have changed so rapidly that "lighting" no longer is simply a matter of carefully choosing fixtures. Rather it involves the meticulous coordination of intelligence aimed at facilitating the variety of tasks at hand, while conceiving a broad range of moods and effects besides.

While the projects in this issue represent a cross-section of small and large firms, we would like to be able to present the work of smaller firms more often. The process for submitting projects to *Florida Architect* is quite easy. We publish quarterly, and each issue has a theme, although we interpret our themes rather broadly. For example, for our Summer issue on "Housing," we will consider vacation homes, rural and urban domiciles, even a college dormitory. Other upcoming issues will focus on Florida Schools of Architecture (Winter) and Working with CADD (Spring 1997). Once again, we would like to request your help in locating meritorious, well-photographed projects from around the state that fit within these themes.

In addition to projects, we also invite articles. We will consider feature-length articles on subjects of interest to architects in the state and viewpoints relating to pertinent legal or legislative issues, practice concerns, or other appropriate topics. One of our editorial goals is to publish more work of younger architects and more wisdom from experienced members of the profession.

Finally, in this issue we are initiating a section of letters to the editor. Whether this is a permanent feature is up to you. Let's hear from you. **MB**

*Florida Architect* serves the profession by providing current information on design, practice management, technology, environment, energy, preservation and development of communities, construction, finance, economics, as well as other political, social, and cultural issues that impact the field.



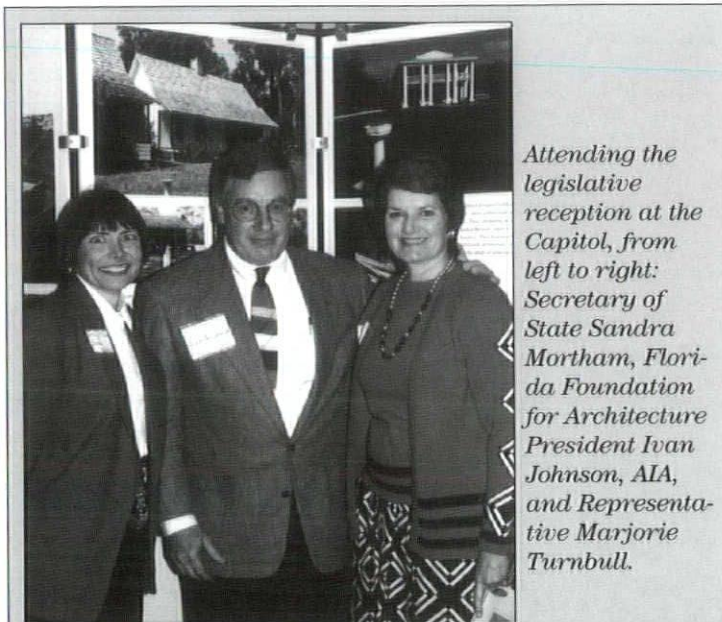
## In Defense of Architects: Engineers' BOPE Statement Halted

A five-year-old policy statement that purported to allow engineers to sign and seal building design documents has been set aside due to the efforts of AIA Florida. On December 11, 1995, the Florida Board of Professional Engineers (BOPE) voted to discontinue reliance upon the statement, which was drafted without public notice and hearings. AIA Florida had challenged the statement in an administrative hearing process on the grounds that the statement had been approved in violation of state law.

A joint stipulation has now been filed with the Florida Department of Administrative Hearings officially notifying the public that the "Commentary on Authority of Engineers to do Building Designs" has been set aside and is no longer a legal document. The joint stipulation was signed by BOPE, Florida Engineering Society, and AIA Florida attorneys.

AIA Florida sued the BOPE last year after the Commentary surfaced in response to complaints by the Board of Building Codes and Standards alleging that several churches had been improperly designed. BOPE responded to the charges by sending copies of the Commentary to building officials in Dade County as verification that engineers could sign and seal building documents.

Although the recent BOPE action and joint stipulation effectively declare the "Commentary" null and void, the issue is not concluded. BOPE has since voted to assign a committee to draft new language on the issue of engineers signing and sealing building documents for consideration as a rule at its next meeting.



Attending the legislative reception at the Capitol, from left to right: Secretary of State Sandra Mortham, Florida Foundation for Architecture President Ivan Johnson, AIA, and Representative Marjorie Turnbull.

## Florida Foundation for Architecture Unveils Florida Treasures

The Florida Foundation for Architecture unveiled *Florida Treasures: A Celebration of Florida's Historic Architecture* at the AIA Florida Legislative Reception on February 7. AIA members from around the state joined friends and supporters of the project, including Secretary of State Sandra Mortham and Representative Marjorie Turnbull, to celebrate publication of the elegant 46-page book. Author Vivian Young was on hand to sign copies. The companion traveling exhibit will be touring communities around the state during 1996-97.

AIA Florida will continue to track BOPE and the rule-making process. Any further BOPE action that might allow engineers to sign and seal building design documents in violation of the architectural or engineering practice acts will be challenged by AIA Florida.

## Knight Steps Down as Dean

Roy Knight, AIA, will relinquish the post of Dean of the School of Architecture at Florida A & M University, Tallahassee, to move into teaching, research, and professional work at FAMU.

Since becoming Dean in 1988, Knight has been involved in the development of FAMU's academic and research programs, as well as the new

School of Architecture and Community design in Tampa. FAMU's School of Architecture is now ready for planned further growth with commitments for a major building expansion approved by the legislature.

"Now that the school is poised for its next period of advancement, it is a good time for me to pursue interests I have had to set aside. I am excited by the opportunity to become an active advocate for good architecture in the state, including continuing to serve AIA Florida."

## Florida Design Arts Awards

Florida Secretary of State Sandra Mortham presented the

1995 Florida Design Arts Awards to *Riverwalk in Fort Lauderdale* and the *Orlando International Airport Passenger Terminal Complex*. These projects "reflect the attention and sensitivity being shown to excellence in collaborative urban design in the state of Florida," said Mortham. The awards were presented in November at the Tampa Bay Performing Arts Center.

Accepting the awards for EDSA, which participated in both projects, were C. Douglas Coolman, Greg Meyer, and John W. Miller. Walter Taylor, FAIA, Chairman and CEO for KBJ Architects, Inc. accepted the award for the Passenger Terminal Complex for the Orlando International Airport.

Entry kits for the 1996 Florida Design Arts Awards program are now available from: 1996 Florida Design Arts Awards, Florida Division of Cultural Affairs, Department of State, The Capitol, Tallahassee, FL 32399-0250; or contact Valerie Ohlsson at (904) 487-2980.

## AIA Design Awards Dates and Deadlines

Mark your calendars. Dates have been set for the AIA Florida Design Awards program. Calls for entries were mailed mid-February. Entry application forms must be received by March 15, and all entries must be received by April 24. The juries will convene in May, and awards will be presented on August 17, at the 1996 Summer Conference at Marriott Sawgrass, Ponte Vedra Beach.

This year's Chairs are Bruce Gora, AIA, Excellence in Architecture Awards Committee; Don Green, AIA, Unbuilt Awards Committee; and Joe Barany, AIA, Test of Time Award Committee.

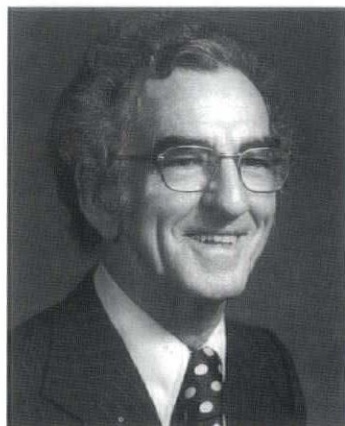


## In Memoriam

Tampa Bay architect **William B. Harvard, Sr., AIA**, died December 11, 1995, after a long illness. He designed some of the most significant landmarks in the Tampa Bay area, including the Williams Park Band Shell, the St. Petersburg Main Library, the Bininger Center and Lewis House at Eckerd College. The Harvard firm, founded 57 years ago, now known as Harvard Jolly Clees Toppe Architects, is the largest locally owned architectural design firm in Central Florida. William B. Harvard, Jr., now serves as its president.

**C. Ellis Duncan, AIA Emeritus**, of Vero Beach, died December 28, 1995. A Past President of the Palm Beach Chapter and State Director of AIA Florida, Duncan also was an active member of the Florida Engineering Society. He had a strong practice in school facilities in Brevard, Indian River and St. Lucie counties.

**Charles Ernest Daffin II**, a long time AIA member, died



*William B. Harvard, Sr., AIA, 1911-1995, Founder of Harvard Jolly Clees Toppe Architects, P.A.*

January 16, in Birmingham, Alabama. A lifelong resident of Tallahassee, Daffin helped organize and then headed the Florida Architects' Political Action Committee. A founding partner of Barrett, Daffin and Bishop, he most recently was employed by the State Fire Marshal's Office.

## Of Note



**Roney J. Mateu, AIA**, Coral Gables, received the Miami Chapter's 1995 Silver Medal for Design, its highest honor. Mateu is President and Director of Design at Mateu Carreno Rizo & Partners, Inc., and has been a featured speaker on architectural design. His projects have been published nationally and internationally.

**Jim Anstis, FAIA**, West Palm Beach, has declared his intent to run for a second term as Secretary of the American Institute of Architects. The Secretary is allowed to succeed to the office one time.

**Michael G. AuBuchon, AIA**, has been named a partner at Ranon & Partners, Inc., Archi-

itects. AuBuchon is the 1996 President-Elect of the Tampa Bay Chapter of AIA.

**David H. Webb, AIA**, has joined the Safety Harbor office of Fleischman Garcia as Project Manager. Webb has over 23 years experience in the design of education and government facilities.

# AIA FLORIDA DESIGN AWARDS

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MAY 1996	JURY CONVENES
AUGUST 17, 1996	PRESENTATION OF AWARDS AT DESIGN AWARDS PROGRAM. <i>Winners will be notified by telephone as soon as possible.</i>

### Questions?

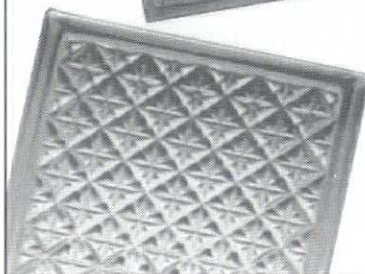
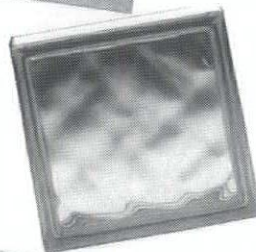
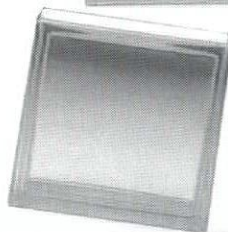
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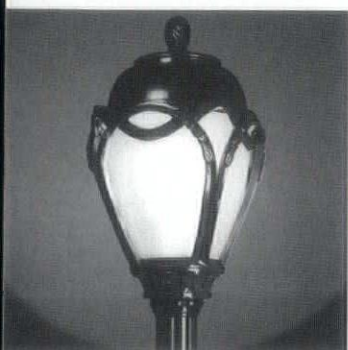
# NEW PRODUCTS

## Distinctive "Neutral" Cera Wash Basins

TOTO KIKI USA's new line of wash basins reflects a philosophy of simple, elegant forms to express a sense of order and quality. The bowls come in enamel, clear and frosted glass, wood, soda glass, and aluminum. The soda glass colors—red, green, and blue—are meant to work well with lighting effects and strong color schemes. The Cera basins can be used as single units with standard counter tops or with other elements within the modular Cera line of lavatories and faucets. For more information, contact Newbold Warden, Marketing Supervisor, TOTO KIKI USA, (714) 282-8686.

## Sentry's St. Louis Luminaire

New from Sentry is a replica of the tulip-shaped luminaire that lights the downtown historic district of St. Louis. Though its style is evocative of yesterday, its performance is definitely up to date. The sculptured looking structure is rugged cast aluminum; the globe is polycarbonate (Lexan); and the ballast unit is housed deep within the cast base for maximum protection. The St. Louis luminaire meets UL 1572 and is available with HPS, MH, or mercury lamps in wattage ratings as high as 250. Specs and details are available from Sentry Electric Corp.; (516) 379-4660; fax (516) 378-0624.



## HomeWorks™ Integrated Lighting Control

The ultimate in lighting control systems from Lutron® Residential Systems Division makes monitoring indoor and outdoor lighting simple and convenient. Controls are compact, easy to use, and available in customized finishes and designs. A single master control can eliminate the need for large banks of switches and can even be mounted in door trim or a door jamb. Various HomeWorks™ system options permit linkage



to a home security system, memorizing and replaying lighting patterns (without complicated programming) to simulate occupancy during vacations, system control from a personal computer, and voice-prompted access by telephone. To find out more, contact James R. Renner, Lutron Electronics Co. Communications Project Specialist, (610) 282-3800; fax (610) 282-6437.

## Philips Mastercolor Metal Halide PAR Lamps

Lightolier has expanded its Calculite HID downlight and ProSpec adjustable accent lamp offerings. The Philips' Mastercolor PAR20 and PAR30 lamps are more energy efficient than standard metal halide lamps, control color shift over the life of the lamp, and yield superior



## Wausau Precast Terrazzo Flooring

Wausau Tile, Inc.'s precast terrazzo flooring is practical, durable, and comes in a wide choice of textures, styles, and colors. Wausau Tile blends aggregates and matrix colors to create polished and slip-resistant shot-blasted surfaces in several thicknesses and unlimited colors. Matching standard accessories such as base, treads, and transitions,

and tile setting materials including thinsets, grouts, and expansion joints are available. Patterns, designs, logos, and unique special effects are made possible by on-the-job or factory-provided cuts. For samples, quotes, or information, contact Dave Spangler, Terra-Paving Division, Wausau Tile, Inc.; (800) 388-8728, fax (715) 359-7456.

color rendering. Available with either magnetic or electronic ballast, they also match the color appearance of halogen, fluorescent, and other lighting sources. Calculite's ProSpec, a complete system of interchangeable light sources, optics, and control media, also offers the flexibility of converting line or low voltage incandescent into metal halide. To learn more about these Lightolier products, contact Bill Schoetler, (508) 646-3124.

## Juno Energy-Efficient Recessed Lighting

Air Loc@IC, created by Juno Lighting, Inc., is a completely sealed recessed downlight fixture that stops air from escaping between floors and into roof areas. The elimination of drafts makes living spaces more com-

fortable and reduces heating and cooling bills. Compared to traditional housings, Air-Loc IC fixtures can reduce home energy bills by \$5 per recessed fixture per year. The downlights are available in a wide selection of sizes and trim styles. For more information, contact Perrie Hayes at (708) 827-9880.





# Light and Energy: Remembering Daylight

By Walter Grondzick, P.E.

Light is a crucial aspect of our daily existence. Some authorities estimate that over 90 percent of the sensory input a person receives in the course of a typical day is visual. Light, defined as visually evaluated radiant energy, is the key to the seeing process. Most outdoor activities—farming, mowing the yard, watching a parade, road construction—have historically been timed to coincide with the availability of daylight. The sky around us can provide more than ample light for most visual tasks during the daylight hours. When adequate energy and financial resources are available to a prosperous and technologically advanced society, traditionally daytime outdoor activities can be conducted at night—baseball under the lights and amusement park visits. Buildings, too, have historically been daytime environments. Fairly recent technological developments, however, have dramatically changed how we schedule, use, and design buildings. Electric lighting was the catalyst for this change, as well as the cause of a dramatic increase in building energy use.

Energy to cool a commercial building in the hot, humid South is typically distributed as follows: 30 percent is attributable to electric lighting, 20 percent to solar heat gain through glass, 15 percent to roof heat gain, and lesser percentages to internal and other loads. Obviously, energy used for lighting is an important design and operational consideration for a building owner. Light is necessary for the completion of simple tasks, for enhanced productivity, and for enjoyment of the built environment; but it comes to us at a substantial cost. On a residential scale, because of different design and usage traditions and less demanding tasks, lighting is not a very large part of the energy-use pie.

The importance of lighting to energy efficiency is reflected in the standards developed to regulate this aspect of design. The *Florida Energy Efficiency Code for Building Construction* contains a section addressing lighting energy consumption in commercial buildings. Likewise, ASHRAE Standard 90.1 (the most commonly used nonresidential national energy standard) allocates a chapter to efficiency requirements for lighting. Residential energy standards are typically silent on the issue of lighting energy efficiency. Efficiency is generally defined as the ratio of system output to system input. The greater the lighting output per unit of electric input, the more luminously efficient the system. Rather than address system efficiencies directly, U.S. energy codes and standards tend to prescribe a lighting power budget (in watts per square foot) which a designer can meet in any manner that seems most appropriate.

The energy consumption of an electric lighting system is primarily a function of four factors: task requirements, the light source, light distribution, and controls. Building designers should take a serious look at the quantity of light that must be delivered to a task (known as illuminance) as a means of reducing lighting energy demands. All other factors being equal, the less light to be delivered, the less energy consumed. The Illuminating Engineering Society of North America publishes guideline illuminance recommendations for hundreds of task situations. Only the project architect, however, can rationally determine what tasks will occur where within a yet-to-be-constructed building. Task analysis is the starting point for an efficient lighting system.

Obviously, the ultimate source of electric light is electricity. There are, however, a number of ways to produce light from moving electrons. Less than one hundred years ago the first commercial electric lamps came on the market and initiated a radical change in the way we design buildings. The first electric lamps (manmade light sources) were incandescent, where an electric current is used to heat a filament until it glows (incandesces) and emits light. This is a proven and effective, but inefficient, means of producing light. In the 1940s, fluorescent lamps operating on an entirely different principle (gaseous discharge) were introduced. The relatively high luminous efficacy (light output to electric input) of fluorescent lamps signalled a revolution in building design through the ability to provide high illuminance levels in a building without massive overheating and without reliance on daylight. Design was freed from historical precedents, but the price for this freedom was energy consumption.

Over the past thirty years, ever more efficient electric light sources have been developed. Many, such as metal halide lamps, have found a ready home in buildings; others, like sodium vapor, have been relegated to exterior applications because of color rendering concerns. The march toward more efficient sources has not stopped; T-8 lamps are rapidly replacing T-12 lamps as the norm. Electronic ballasts are replacing magnetic ballasts. Government labs and lamp manufacturers continue the quest for greater luminous efficacies. The federal Energy Policy Act of 1992 dictated that certain commonly used lamp types no longer be permitted in the U.S., a mandate that will soon reduce the palette of available choices.

Light emitted from a lamp must be delivered to a task in order for the light to be useful. The task may be surgery, climbing the stairs, or providing appropriate background brightness in a space, but in any event the light source will normally be distant from the task. The more effectively light is conducted from lamps and luminaires (fixtures) to tasks, the more efficient the lighting system. It is possible to have very efficient lamps and very inefficient distribution; the result is an inefficient lighting system. Lighting design is a multi-disciplinary endeavor. Manufacturers produce lamps and luminaires; an engineer or architect will select lamps and luminaires for a particular application; but only the architect can ensure efficient distribution. This is achieved through design and specification of material and content reflectances, source locations relative to tasks, and general proportions of the space.

Lighting controls are an emerging area of focus for efficient lighting systems. A lighting system only consumes energy when it is turned on and only need be turned on when there is a task to be completed. Controls may be manual or automatic. In general, automatic controls will provide greater energy savings as they are not forgetful or lazy. A number of energy-efficient Florida buildings have made effective use of occupancy sensor controls in spaces that are not continuously occupied.

For thousands of years, buildings were primarily daylighted. Of course candles and oil lamps have long been available, but they are not efficient or powerful light sources. The image of Abraham Lincoln reading by candlelight suggests the luminous quality of most



historic buildings after dark. The development of electric light sources and an electric distribution system to support their operation changed this picture. It was possible to be overwhelmed by illuminance 50 feet below ground or 150 feet and six partitions away from an exterior wall. Building forms changed; the art of daylighting was generally forgotten.

Tapping into the naturally available daylight source (the sky surrounding a building), distributing daylight effectively to tasks, and providing appropriate controls are the essence of daylighting design. The main differences between daylighting and electric lighting are that daylight is variable and comes from outside the building envelope, whereas electric light is constant and comes from within the building envelope. Dealing with these differences is the key to successful daylighting.

Radiation from the sun consists of three main components: infrared, ultraviolet, and visible. The infrared portion makes itself felt as heat and contributes nothing to seeing. The ultraviolet portion can play havoc with materials and people and also contributes nothing to seeing. Only the visible portion is light.

Interior light harvested from daylight is often viewed as a "free" energy resource. From the purchase and payment point of view this is correct. Additional first and design costs may, however, be incurred to properly collect and distribute this resource. There are ample examples and documented case studies to suggest that the skillful use of daylight—collecting visible radiation, avoiding ex-

cessive infrared radiation, controlling glare, and shutting off unneeded electric lighting fixtures—can substantially reduce the amount of energy required to illuminate a building. Daylighting can also improve the ambience of a building and has been shown to increase productivity among workers.

**T**he Department of Management Services (DMS) prototype office buildings in Tallahassee and the Florida Solar

has dramatically increased, efficient lighting accounts for the majority of this performance. This efficiency was achieved through the specification of reasonable illuminance levels, the use of efficient lamps, ballasts and luminaires, and occupancy sensors for lighting control.

The new FSEC Energy Center uses both efficient electric lighting and daylighting to set a new standard for energy efficiency in Florida. The electric lighting system requires just 0.9

diminable ballasts to adjust overall lighting levels as daylight increases or decreases.

It is no secret that lighting accounts for a major portion of the energy bill in any commercial or institutional building. However, use of efficient lamps and fixtures, consideration of the distribution of light to tasks, and control of light when not needed can greatly reduce the energy burden associated with lighting. Skillful design of daylighting systems can take such

reductions even further, with potential side benefits to the overall quality of design.

#### **For further information:**

*Advanced Lighting Guidelines*, U.S. Department of Energy, DOE/EE-0008 (available from National Technical Information Service), 1993, is an excellent review of reasonably current thinking regarding energy efficient lighting systems and components.

*Daylight in Architecture*, by Benjamin Evans, McGraw-Hill, 1981, although 15 years old, is a readable and wonderfully illustrated introduction to daylight in buildings.

The Building Design Assistance Center, Florida Solar Energy Center, Cocoa, Florida, can provide a wealth of information on electric lighting components and daylighting design for Florida's environment.

*Walter Grondzik, P.E., is an Associate Professor, working with the Florida Design Initiative at Florida A & M University School of Architecture, Tallahassee.*



*Daylight floods the 4,000 square foot visitors center of the Florida Solar Energy Center. Comfort and energy efficiency are protected by the special window glazing, which lets in 67 percent of visible light while blocking all but 2 percent of infrared heat.*

Energy Center (FSEC) facility in Cocoa provide examples of how energy savings can result from energy-efficient lighting design. Metered electricity consumption for the DMS prototype offices in mid-summer 1995 was around 2.0 watts per square foot. This includes all electric uses (computers, lights, air-handlers, etc.) except chillers and is lower than just the lighting load in most office buildings built during the past twenty years. As computer use

watts per square foot as a result of the use of T-8 fluorescent lamps, efficient fixtures, and electronic ballasts. Spectrally selective window glazing improves daylighting effectiveness by providing high light transmittance (56 percent) but low nonvisible transmittance (shading coefficient of 0.33). Building orientation and form were architecturally manipulated to make best use of the daylight available on the site. Photometric sensors control continuously



## Sophisticated Showcase

**Residence of  
Chapman J. Root II  
Ormond Beach, Florida  
William Morgan  
Architects, P.A.**

When the first plans were drawn for the Root Residence, its setting was to be a 125-foot wide lot overlooking the Halifax River, the Intercoastal Waterway. Initial sketches envisioned two three-story towers set well apart and linked by bridges. The glazed west wall of the connecting space would permit views of the waterway, while sunscreens would deflect the afternoon sun.

Then the site was changed to an 80-foot wide oceanfront lot on the Atlantic. Securing privacy from neighboring residences and the shore highway meant adjusting the original fenestration plan. Also, a maximum permitted building height of 30 feet on the new site necessitated some additional modifications to achieve the desired intention.

To gain height for the interior volumes, the site was excavated five feet into the dune. This permitted ceiling heights to range from 9 feet on the lower floor to 13 feet on the *piano nobile*, the second story, to more than 31 feet in the glazed refectory hall overlooking the pool terrace and ocean.

The south tower contains changing rooms on the terrace level, a secluded study above, topped by a crow's nest. Occupying the north tower are the kitchen and an informal living area on the lower floor, a library (accessible from the foyer by means of a bridge) above, topped by the master suite. Guest accommodations and service spaces are located in the floors above the garage.

Load-bearing, fluted concrete-block walls support the architectural masses of the



*Glazed refectory hall overlooks the pool terrace and ocean.*



6,500 sf structure. The walls support horizontal floor and ceiling planes that project alternately from east to west and from north to south. Stair runs of varying lengths interconnect the constantly changing levels of the interior. As a result, moving through the house, one's viewpoint always changes, and ceiling heights alternately expand and compress.

Daylighting was a major determinant in designing this beachfront residence. Since major glass areas face the dominant view to the east, special emphasis was given to controlling the morning sun by such devices as vertical fin walls, horizontal overhangs, adjustable blinds, and the refectory sunscreen which is controlled by photoelectric cells. In the evening the entry terraces are illuminated by lanterns integrated into the garden walls, and a sophisticated control system provides five separate moods for lighting throughout the residence, terraces, and gardens.

As a precaution against coastal scouring during severe storms, the entire structure is supported by auger piles. A concealed gutter around the edge of the terrace controls stormwater runoff during northeasters and hurricanes. And for the 20 x 26-foot glass wall of the refectory, four tempered, 3/4-inch glass fins stiffen the glass plates against wind velocities of up to 120 mph. Horizontal concrete box beams above and below the window transfer windloads to adjacent reinforced-concrete walls.

Throughout the design process, another priority was to create opportunities throughout the home to display the owner's collections, including specially commissioned glass sculptures by noted artist Dale Chihuly. Also, automobiles selected from the owner's extensive collection



*Night lighting accents the towers and many interior levels.*

are showcased in a grand pavilion. Visitors, after leaving their own cars in a landscaped parking section, walk through a grass-covered forecourt to this area.

As they continue toward the entry, visitors ascend three low terraces defined by a garden wall, masonry lanterns, and dense landscaping. Proceeding through the foyer, they are

surprised to find themselves a full floor level above the refectory hall and pool terrace. From there they can view the cascading pools that flank the pool terrace and the path leading through the dunes to the beach.



*Dual towers rise from the dunes, which conceal auger piles and other precautionary devices that protect the structure from coastal storms.*

**Architect:** William Morgan Architects, PA.

**Principal in charge:** William Morgan, FAIA

**Project Team:** Theodore Strader, AIA, Ronald Scalisi, AIA, Thomas Duke, AIA

**Structural Engineer:** William Simpson, P.E.

**Landscape Architect:** Glenn Herbert, ASLA

**General Contractor:** Foley & Associates

**Interior Designers:** Pasanella + Klein; Wayne Berg, AIA, Albert Ho

**Owner:** Chapman J. Root II

*Photographs by George Cott, Chroma, Inc.*



## A Plan That Came Together

**Palm Beach South County  
Civic Center  
Delray Beach, Florida  
Robert G. Currie &  
Associates**

**A**lthough it was born in controversy, the Palm Beach South County Civic Center has drawn praise and crowds from the day it opened in January 1994. Completed after years of debate and changes in both plan and site, the 14,000 sf multi-use facility has become a real center for the community.

Located on 1.2 acres of a somewhat remote 5-acre site south and west of town, the civic center is assembled toward the heart of the larger site, for which future buildings have been proposed. Visitors encounter the striking glass and stucco facade of salmon, beige and aquamarine.

Local groups and organizations are taking advantage of the center's very practical components, including classrooms, a kitchen, and a 600-seat auditorium. A soundproof wall system allows the auditorium to be used as a large hall for performances and lectures or divided into four autonomous meeting or recreation areas.

The solid cube of the assembly hall is the nucleus of the facility. Three smaller ancillary structures radiate from the center, guided by a curved bisecting wall. The free-form lobby creates a fluid relationship between the assembly hall and its satellites. The arrangement of smaller elements around the entry, cascading from the curve, effectively diminishes the substantial mass of the hall, effecting a human-scaled assembly open to its surroundings. The standing seam metal roof of each element, although basically similar in shape, shows a deliberate variation in its slope and orientation. Likewise, varying depth of color of the independent roof



*Entrance and main facade. Deliberate variations in roof pitch, orientation, and depth of color distinguish each pod within the whole. Photograph by Chuck Wilkins*



sections helps distinguish each pod within the whole.

Each geometric element houses a separate function and is independent in terms of sound, hvac, and lighting capabilities. Largest of the satellites is the administration complex, comprising offices and a conference room. A multizone system with cooled condensing units promotes energy efficiency.

Natural sunlight illuminates the glass-enclosed lobby, and at night, a continuum of spot lighting files above the curved separating wall, reinforcing the initial design concept. Lighting in the auditorium is direct and dramatic. Pendant downlights hanging on a level plane from the sloped and exposed structure create an implied ceiling of light across the entire expanse. Three suspended ceiling planes over the stage area provide both acoustical treatment and positions for spotlighting.

Since the facility opened it has seen capacity use by civic groups and private users. The center's flexible multiuse plan is proving the perfect accommodation for a variety of formal and informal user needs, including meetings, classroom programs, social events including weddings and religious gatherings, and small stage productions.

**Architect:** Robert G. Currie & Associates

**Principal in charge:** Robert G. Currie, AIA

**Landscape Architect:** Palm Beach County Parks

**Structural Engineer:** O'Donnell Naccarato Mignogna, Inc.

**Civil Engineer:** Sheremeta Associates, Inc.

**Mechanical/Electrical**

**Engineer:** Thompson Engineering Consultants, Inc.

**General Contractor:** Select Contracting, Inc.

**Owner:** Palm Beach County Capital Improvements



*Pendant lighting illuminates the auditorium, which can be used as a large hall or divided into four autonomous areas. Photograph by Dan Forer.*



*Daylighting and downlighting highlight painted accents and dramatic expanse of ceramic tile flooring in free-form lobby, which doubles as an exhibition space. Photograph by Chuck Wilkins*



# Lighting Design as an Integral Part of Architectural Design\*

By David M. Laffitte, AIA

## Orlando International Airport, Phase II Orlando, Florida KBJ Architects, Inc.

In 1987, KBJ Architects began design of one of the largest projects in the Southeast: the Phase II Expansion of the Orlando International Airport. The original construction (also designed by KBJ Architects) consisted of one landside and two airside buildings. Shuttle trains connect the concourses with the main terminal.

The Phase II Expansion more than doubled the size of the landside facility, including a 450-room hotel and parking garage on top of the building. It also added a new airside terminal, which became a hub for Delta Airlines, serving domestic and international flights. Together the projects represent 1.7 million sf of enclosed space and over \$200 million in construction costs.

Since it serves as an arrival point for millions of visitors annually, the client wanted the experience of the facility to be both pleasant and particular to Florida. The architectural intent was to evoke the essence of Florida: "light and sunny" were characteristics we sought to include in these structures.

From the start, lighting design was an integral part of the architectural design. Partner-in-charge and project designer Walter Q. Taylor, FAIA, decided that all lighting design for the public spaces would be developed first by KBJ, and then handed off to the engineering team. It has been our experience that early consideration of lighting results in a more successful project. There is an interplay or "synergy" between the design of interior spaces and the lighting of them which benefits both.

The design approach we took

was, in simplest terms, to integrate the lighting with the architecture. Walls and defining planes are illuminated with wall-wash fixtures. Architectural features and circulation nodes are articulated by the design of the ceilings and lighting. Where ceilings are conceived as a neutral element, such as in the ticket lobby, low-brightness

my, most of the lighting fixtures chosen were standard catalog items. Though a small part of the total, the most memorable fixtures are the custom-built ones we developed for special applications.

### *Rental car and ticket counters*

The need for custom fixtures first became evident while de-

no suitable off-the-shelf product and that a custom fixture was the only solution.

The design that emerged can be thought of as an indirect fluorescent fixture that carries its own reflector. Compact fluorescent lamps and ballasts are fitted into a 3-1/2-inch diameter aluminum extrusion. For the shade we chose perforated aluminum; we reasoned that it would be both durable and easily cleaned, as well as being nonflammable. The units are constructed in 11-foot 4-inch lengths to coordinate with the 34-foot bay sizes of the building.

Southern Manufacturing Company of Orlando was selected to construct the fixture. Despite their well-equipped plant, we had some initial misgivings about their ability to produce the fixture: their principal product line did not include lighting at all. However, after a mock-up was constructed and details of connections refined, we gained confidence in the firm's technical ability. Having ready access to their plant was invaluable in the development of the final details of the fixtures.

The higher ceiling of the ticket lobby invited the design of a larger fixture. The radius was increased to just over two feet. A 5-inch extrusion was selected for the lamps. These units are constructed in 17-foot lengths, with six 5-foot lamps, to coordinate with the 34-foot structural bay of the building. They also align with the rows of ceiling-recessed fluorescent fixtures perpendicular to the ticket counters. The typical (total) counter and fixture length is 153 feet.

### *Elevator lobby*

Two-story-high columns stand in front of a pair of elevator entrances. We took advantage of their grand scale to create light columns. Heavy-gauge



*In each concourse, custom indirect light fixtures bracketed off the columns provide ambient lighting to supplement daylight from the windows and continuous skylights.*

fluorescent and HID downlight fixtures were employed. In other areas, where more definition of the ceiling was desired, the rental car lobbies for instance, indirectly lit coffers add scale and drama. Indirectly lit coffers were also used in the baggage claim lobby to aid in the identification of elevator and escalator cores. For reasons of econo-

signing the rental car counters. We were looking for a pendant fixture to bring down the scale at the counter to reflect the person-to-person nature of the transactions. We wanted the friendly glow of a lamp shade, in a linear-form, and we needed to provide comfortable task lighting for agents to work. We quickly realized that there was





*In the Great Hall and Hyatt Hotel atrium, streetlight fixtures and a lighted fountain help create an urban park atmosphere.*

perforated aluminum and a translucent liner shield four-lamp industrial fluorescent fixtures mounted vertically on the face of the columns.

#### *The Delta Airside Building*

The lighting design of the concourse began with the decision to take advantage of available daylight; artificial lighting is supplemental. Full-height clear laminated glass is used continuously along the perimeter of the concourses, affording views and light. Trellis-like white metal baffles provide shading of this glass and redirect light into the building.

A continuous 5-foot-wide skylight down the center of each of the three concourses provides top-lighting to balance light from the windows. The ceiling arches up to the skylight to distribute the light more evenly. The decision to light the curved ceiling indirectly seemed the only logical choice; fluorescent fixtures suited the linear nature of the space, and bracketing the fixtures off columns provided a way to integrate the indirect cove details of the outer bays with the center bay.

The fixture was conceived as a companion to the fixtures

designed for the ticket and rental car counters, hence the curved perforated metal form. This fixture has some obvious differences, however. For higher lumen output, continuous rows of 40-watt compact fluorescent lamps were chosen. A reflector directs light from these lamps toward the ceiling. To create the glowing effect from below, standard 40-watt fluorescent lamps are mounted on both sides of a supporting center steel tube. The perforated metal dish is lined with translucent plastic to shield the lamp image. These fixtures were fabricated in 27-foot

lengths; the total installed length is 1,438 feet.

Around the semicircular skylight well at the ends of each concourse, decorative wall sconces utilize two-lamp 13-watt compact fluorescent wall-pack units shielded by a lined, perforated metal shade.

#### *Airside Concessions Atrium*

The center of the airside building features a 150-foot-diameter skylight supported by six steel tri-columns—that is, three 24-inch-diameter steel tubes in a triangular cluster. To accentuate them we developed a bollard-

*Continued on Page 18*



## Lighting Design as an Integral Part of Architectural Design\*

*Continued from Page 17*

like fixture which utilizes a standard metal halide fixture to uplight the columns. Slotted metal cylinders with translucent liners provide a glow at the base of the column. These are fitted with 13-watt compact fluorescent lamps. Because the columns are joined at the base with three one-inch-thick horizontal steel plates, the custom fixtures were constructed in nine separate sections and fitted between the plates in the field.

**Great Hall - Landside Building**  
A 450-room hotel surrounds the primary public circulation space of the airport, creating a six-story skylit atrium which was designed to be perceived as outdoor space. Lighting design had to consider the visual comfort of both the passengers at "street" level and hotel guests above.

To reinforce the perception of the atrium as an urban park, we designed special streetlight fixtures with clusters of clear glass globes. Clear incandescent lamps are used for their sparkle, though they are dimmed slightly to extend lamp life.

Clusters of palms surround the fountain at the center of the atrium. Because the skylights admit only 14 percent of available daylight, supplemental lighting is required for the palms during the day. Clusters of narrow-beam adjustable H.I.D. downlights were designed for this task. These are suspended from the skylight structure at 72 feet above the floor and each contains four 400-watt metal halide units for daytime use and a single 250-watt mercury unit for "moonlighting" effects at night.

To accentuate the archi-



*Pendant fixtures provide a pleasant glow and comfortable task lighting for ticket agents.*

ture of the hotel, compact fluorescent uplights illuminate each balcony column without disturbing guests or producing glare from below. Uplighting of the fountain jets, and accent lighting within the planters

complete the lighting of the atrium. The combination of these sources and spill light from the hotel provide efficient and pleasant ambient lighting for general circulation.

Throughout the entire project we took every opportunity to enhance the distinctive features of the architecture with lighting. Whether providing visual cues to aid circulation or reinforcing architectural rhythms, the lighting design was a carefully considered part of the whole. This is an approach that can work for any project, whatever the scale. Lighting is one of the elements of architecture, and it can be a powerful design tool.

*David M. Laffitte, AIA, is a Senior Vice President with KBJ Architects, Inc., Jacksonville and Orlando, Florida.*



*In the Delta terminal, bollard uplights illuminate the columns that support the great central skylight.*

**Architect:** KBJ Architects, Inc.  
**Principal in charge:** Walter Q. Taylor, FAIA

**Lighting:** KBJ Architects, David Laffitte, AIA

**Structural Engineers:** Kun-Young Chiu & Assoc., O'Kon & Company

**Mechanical Engineers:** Newcomb & Boyd, R. Douglas Stone & Assoc.

**Electrical Engineers:** Newcomb & Boyd, Matern Professional Engineers

**General Contractor:** Great Southwest Corporation

**Owner:** Greater Orlando Aviation Authority

*Photographs by Kathleen McKenzie*

\*This piece draws substantially from "Delta Lands a Winner," by David M. Laffitte, May 1992, *LD+A*, ©1992, published by the Illuminating Engineering Society of North America, 120 Wall St., New York, NY 10005.



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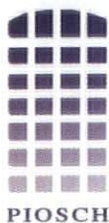


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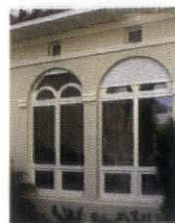
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## Carving Out a Downtown Niche

**Urbanform Design Group  
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Urbanform Design Group,  
Inc.**

Sandwiched between mostly mundane commercial and office buildings in downtown Fort Lauderdale is the dynamic and colorful office of Urbanform Design Group, Inc. Friends were surprised when, in January 1994, the firm leased two narrow, shotgun storefront spaces in a dilapidated building a block north of City Hall. Transformation of the 3,600 sf space into separate but integrated offices by—and for—the firm's architecture and interior design divisions would be an interesting challenge.

The group was determined not to let a tight construction and renovation budget (\$56,000) dictate a low-budget look. Much of the charm lies in the imaginative use of space and of inexpensive and stock components.

A central hexagon encompasses office areas for the division managers. Large interior windows created open interior vistas as well as allowing greater access to the limited exterior view. An octagonal conference area and other angular walls help break the monotony of the long, narrow space on the architecture side.

An open, landscaped space was created for the interior division using columns and wood beams to create seven rectangular bays. Each bay displays a different selection of colors and materials compiled from samples received from distributors, including marble, slate, tile, wood, and other natural and fabricated materials.

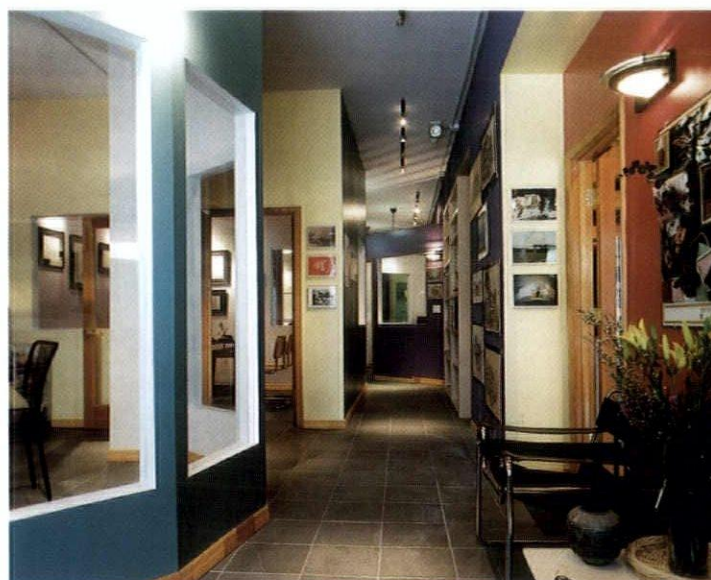
Striking columns feature a variety of faux finishes and wall coverings. Besides adding an



*Reception area and octagonal conference room incorporate an unusual range of colors, textures, furnishings, and natural and artificial lighting effects.*

interesting blend of textures, this concept has proven to be popular with clients, who are able to see how the materials and finishes they are considering look installed. Likewise, exposed air-conditioning ducts and electrical raceways serve as a hands-on learning environment for clients.

Special attention was paid to color and lighting. A slightly unconventional approach led to variety over homogeneity. Intense colors—lots of them—and assorted lighting fixtures help interpret functional areas. Stock fixtures, in a carefully selected combination, serve both practical and decorative functions. Pendant fixtures complemented by desk lamps provide general and individual lighting in the drafting areas,



*Angular walls with sharp verticals elude monotony in passage way of architectural section. Interior glazing and light color walls in conference room and principal's office add open feeling to closed spaces.*





*Interior design section, with exposed air-conditioning ducts and electrical raceways. Bays defined by wood beams and columns contain an interesting array of installed sample treatments for clients to encounter. Faux finishes by Karen Berg.*

while track lights accent walls and art work. The interior design section is lit with tracks for general lighting as well as to highlight displays. In the transit and reception area and in the coffee room, wall sconces help create drama and definition. Reflections caused by the different types of light, with or without added daylight, vary the intense colors, broadening the color spectrum even more.

Lest it sound like a helter-skelter look prevails, the result is quite the opposite. Forest green and deep purple, the colors of the firm's logo, define principal spaces. Flooring in the public zones, including the

reception and conference areas and the principal's office, is an expanse of slate. Work areas, such as the drawing room are installed with carpeting in the logo colors.

Surrounded by a neighborhood of neglected buildings, first-time visitors are generally surprised to find themselves

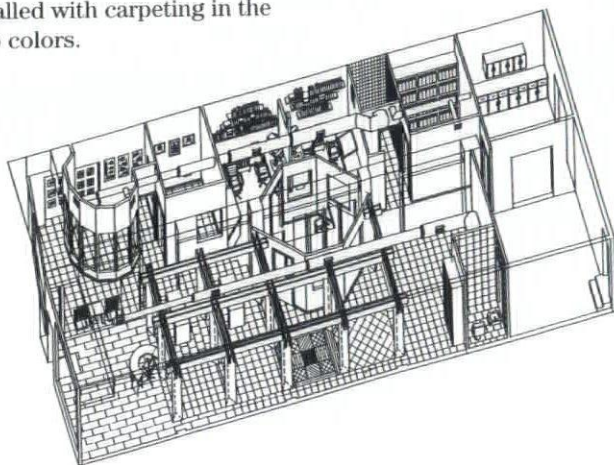
in this jewellike space. Besides their own project to create a vibrant office space from a bombed-out shell within a budget, Urbanform Design Group, Inc. specializes in single and multi-residential architecture and interior design.

**Architect:** Urbanform Design Group, Inc.

**Design Team:** Kaizer Talib, AIA, Thierry Kawczynski, Assoc. AIA

**Interior Design:** Beth Kaplan, Cristina Towne

*Photographs by Roy Crogen*







Museum of Science and Industry, Tampa, Florida  
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# LETTERS

## Can Engineers Practice Architecture?

As a professional engineer licensed to practice in Florida, I find Mr. Huey's article in the Fall 1995 issue to be highly biased. Having been involved with NSPE's review of the Federal anti-trust investigation, I know there is a great deal of vague misinformation thrust upon the public, building officials, engineers and architects by such biased articles. There are a number of other cases nationwide which shed light upon the division line between the practice of architecture and the practice of engineering. As general counsel of the Florida AIA for 20 years, Mr. Huey's bias is understandable, but his article only represents his opinion.

The fact is, most statutes specifically exempt engineers from the statutes applicable to architects, and vice versa. Most building codes recognize the design professional as either an architect or an engineer. The debate as to who may lead and who may follow is largely academic. Both boards were created to protect the interests of the public, and in that purpose there is common ground. Registrants are qualified based upon their training, education and experience by both boards. Although an electrical engineer is registered as a professional engineer, it would be uncommon for him to complete the structural design of the tower and foundations which hold up his cables, although legally (under the law) he can accept a contract for design of a power transmission system. As a registered professional he is charged to practice in areas only in which he is competent by training, education and experience. He is expected to associate a structural engineer as required by the assignment. Similar par-

allels can be drawn in architecture. There are those architects who specialize in residential work, just as others specialize in health care, educational, high rise, commercial, etc.

It is the individual registrant's responsibility to competently carry out any assignment they accept; by affixing their signature and seal, they certify they have.

Consider for a moment the medical profession. A general practitioner would not attempt a heart transplant or brain surgery, although all are medical doctors.

The division line between architecture and engineering is a purely rhetorical, academic discussion which is more of a turf battle for clients than in protection of the public's interests. The public's interest is served by the employment of a design professional who competently carries out his assignment.

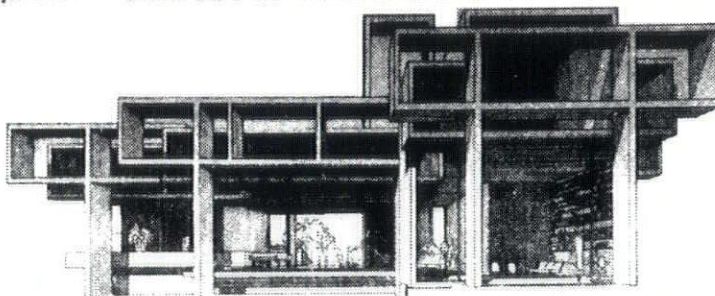
Each professional should practice only in their area of education, training and experience. It is a professional responsibility for which each professional should be strictly held accountable and liable. The standard is due diligence and care ordinary to the industry. Violators should fairly be subject to the wrath of their registration boards whether an architect or engineer or other professional. Legislation or interpretations which are protectionist of turf between the engineering and architecture does nothing but create a controversy and "in-fighting." The energy would be better spent in focusing upon professionalism within your own professional field.

And that is my opinion.

Kirk N. Nivens, P.E. & P.L.S.  
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**"Utopia is always local."**

— Michael Sorkin



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# VIEWPOINT

## Light—The Power to Transform

By James P. Fleming

**L**ight and color are as natural as sound and smell. And it seems that today these and other natural elements are finding a renewed importance in home design with the revival of the concept of the home as a sanctuary.

Natural products like wood, leather, stone, and interior trees and plants often form the basis of interior design programs. Details such as running water fountains, wind chimes, and scented potpourri satisfy the desire for soothing sounds and smells.

Integration of the dynamics of color and light are contributing, too, in a large way, to the overall picture. The wise and creative use of light, through the collaborative efforts of architect, interior designer, and lighting designer, can bring out the maximum design potential of any space. A strategic tool in creating an environment that

evokes a mood or a subtle atmosphere of elegance or drama, lighting has infinite possibilities. The use of colored filters with secondary light sources further enhances the ability to create drama and warmth, transforming the entire feeling or spirit of any interior or exterior.

The lighting industry has been experiencing a rapid development in new lamp technology and in control technology, which, through the creative manipulation of light, now allows a homeowner to be a "conductor" of the home environment. Complete integration of controls on all light sources allows the lowering and layering of light levels to modify and enhance the mood of any space or series of spaces.

On a basic level, it is possible to transform a home or office space through something as simple as upgrading the current light bulbs to various qualities of bulbs that effect a layering of color, shadowing, or texture. For example, most homes have high-hats or recessed cans in the ceiling into which R30 or A19 bulbs originally were installed. By changing to new capsule light halogen bulbs, called Par 20, Par 30, or Par 38, the feeling of those spaces can be transformed. The new lamps allow a fresh, crisp, clean light that brings out the full color of tile, marble, fabric, and other finishes.

Another easy but effective way to enhance a space is to replace wall switches with dimmers. Rarely is it desirable to have lighting at full brightness levels. Such illumination can be harsh, cold, and even obtrusive. It also is counterproductive to creating the feeling and mood that your home or other space has the potential to offer. A light source without a dimmer can be compared to a radio without a volume control. The ability to

moderate the level of light is essential.

In the home, updating light bulbs to include the new lamp technology and installing dimmers throughout (that means not just the living room but kitchen, dining room, hallways, bedrooms, bathrooms, and outdoor areas) gives the client the ability to transform spaces. It's important for architects and interior design professionals to be aware of these low-cost ways to achieve high client satisfaction.

Since many Floridians have the luxury of year-round gardens, it is worth mentioning the rich possibilities that exist in landscaping illumination. Landscape lighting is no longer an option but a requirement for new luxury homes. New

products developed in the past decade allow landscape architects to incorporate beautifully effective, low-maintenance, economical outdoor lighting systems.

Because of continuing advances in the industry, there is much that is new and exciting. To save time and mistakes in sorting out what is good and bad (and ugly), most architects and interior designers can benefit from the services of a professional lighting consultant or lighting designer.

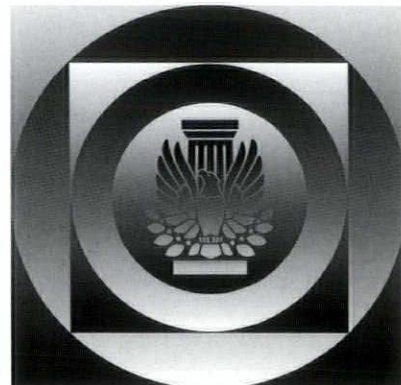
*James P. Fleming is President of Lite-Spec & Design Group, Inc., and Vice President, Lighting Designer and Interior Furnishings Buyer/Industry Consultant at Farrey's Design Galleries, Miami.*

***A light source without a dimmer can be compared to a radio without a volume control. The ability to moderate the level of light is essential.***



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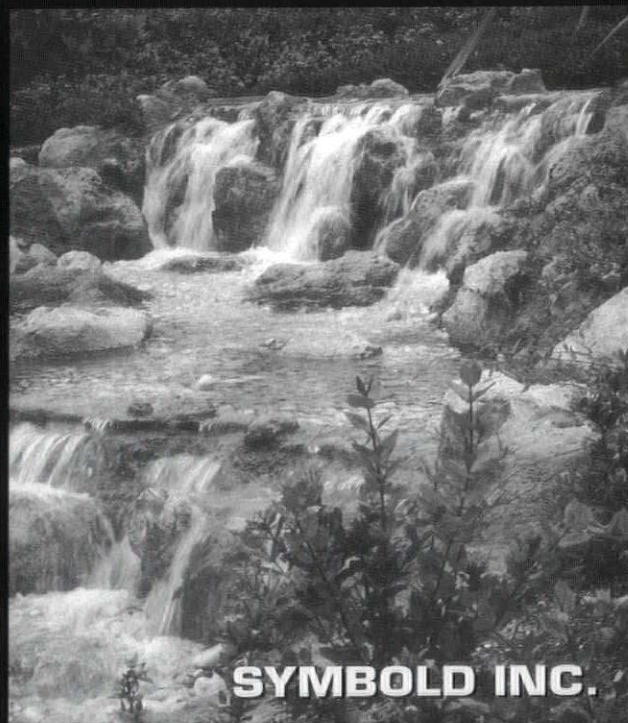
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## Harmonious by Design: Light and the Built Environment

By Robert J. Laughlin

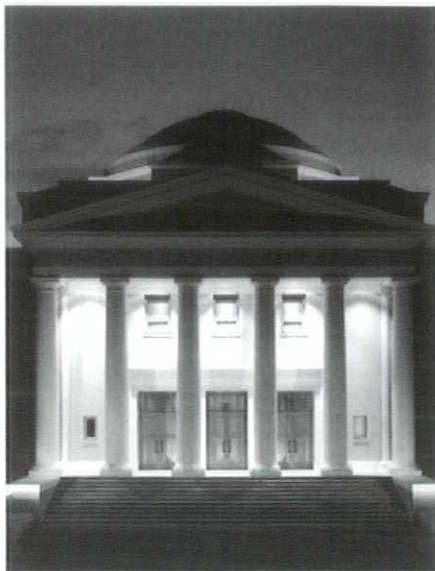
Light has long been considered as fundamental to architecture as form and function. In this century it was Le Corbusier who said, "Architecture is the masterly, correct, and magnificent play of masses brought together in the light..."

In addition to defining a structure's planes and features, light has always played a part in defining its purpose. After all, it was the light in the great cathedrals of Europe that exemplified their spirituality.

Today light retains its importance in the success of any work of architecture. Both its aesthetic and its commercial value are taken seriously, and the industry is flourishing. The work of lighting consultants, too, is gaining recognition, not just in blockbuster projects and night lighting, but in general commercial projects, such as themed hotels, restaurants and residences, hospitals, shopping centers, factories and showrooms, and every other type of construction.

More and more, architects are realizing that using a lighting consultant can *save* time and money in many types of projects. The lighting consultant already has done the research—keeping abreast of new technology and energy concepts, and has the tools at hand—a vocabulary of thousands of fixtures from hundreds of sources and the knowledge of what works where. While there is a misconception that using a lighting consultant means added costs and expensive fixtures, more often the reverse is true. For a lighting consultant the goal is achieving the right effect using light, *not* using expensive fixtures. In fact, the best solution seldom is the most costly.

Finding appropriate fixtures for the project at hand, considering the desired look and effect as well as cost, maintenance, and energy efficiency, is the foremost task. While often an



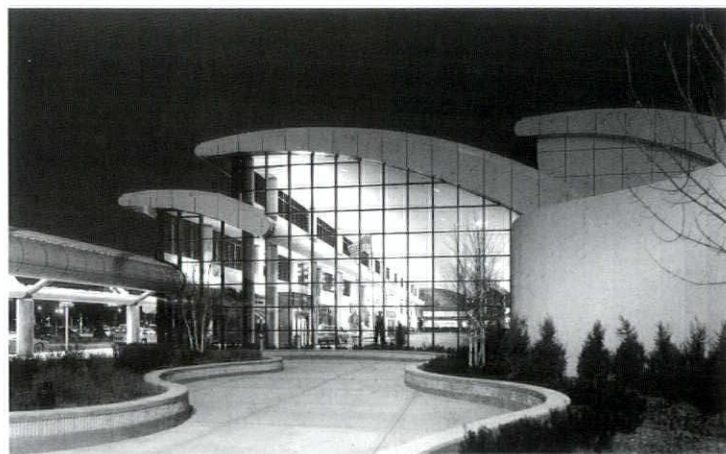
*The Florida Supreme Court. Restoration by Barnett & Fronczak Architects, Tallahassee, Florida. Lighting designed by Robert J. Laughlin & Associates. Photo: Kathleen McKenzie*

owner or architect may go for the "hottest" or "coolest" new look or technology, the lighting consultant can advise whether these will work to advantage—and if not, what will.

Florida may have more themed architecture than any other place in the world. Recently, themed architecture has spilled out of the theme parks and is affecting virtually every building type. The basis for theming architecture and the associated lighting is a "story line," an overall program—sometimes highly complex to cover all the various elements within a story or theme. The

story line is the lighting consultant's guide for lighting the facility in such a manner that it takes on a particular feeling or character—both interior and exterior.

The first level of lighting should be of an adequate type and character to provide the lighting required for the intended use of the space. Additional lighting should highlight or bring out the character and beauty of the architecture and its forms and spaces. If exposed light fixtures are required, they should complement rather than distract from the architecture. Sometimes custom fixtures are



*Bishop International Airport, Flint, Michigan. Reynolds Smith & Hills Architects, Jacksonville, Florida. Lighting designed by Robert J. Laughlin & Associates. Photo: Neil Rashba*

designed to give a building its own special sense of place, and the architect, of course, contributes to the design process. However, it is often easier and more cost effective to modify existing fixtures. Using standard components has the advantage of saving problems down the road in the form of costly maintenance or hard-to-replace parts. The lighting consultant can choose from a repertoire of thousands of fixtures to accomplish this.

An important element in any lighting scheme is how it will affect the people utilizing the space. Unless patrons look good, they will not feel good, and this may affect their perception of the architecture and its intended use. Lighting has a strong impact on people and their feelings and reactions. Therefore, achieving effective lighting helps achieve the maximum utility of any space. Department store lighting must make people look and feel good or they might not buy. And in a restaurant or grocery store, bad lighting can make even the most beautifully presented food look unappetizing.

An important responsibility of both the lighting consultant and architect is to see that every aspect of their project works together as a whole and does its part to enrich whatever human experience takes place there. The more successful their lighting design is, the more successful their architecture will be.

*Robert J. Laughlin, of Robert J. Laughlin & Associates, Lighting Consultation and Design, Winter Park, is a long-time AIA Professional Affiliate as well as an active member of the Illuminating Engineering Society and International Association of Lighting Designers. Recognition of his work includes several AIA Florida Honor awards.*



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